How DPA Budget and Staffing Levels Mirror National Differences in GDP and Population

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his IAPP Westin Research Center report analyzes privacy regulators' budget and staffing levels. Using data from the International Conference of Data Protection and Privacy Commissioners' Census 2017, the analysis reveals that data protection authorities in North America have larger budgets and more staff than their counterparts around the world. Europe, the region with the highest total number of member DPAs, ranks third out of five regionally — behind North America and Asia/Oceania and ahead of Africa/Middle East and South and Central America — in terms of current DPA budget and staff levels. Overall, authorities who operate within OECD-member countries also have significantly higher budgets and employ more staff than their non-OECD counterparts. Using GDP and population figures obtained from the World Bank, this report also shows that these disparities in the distribution of DPA resources around the globe reflect national differences in wealth and population.

The median per-country DPA resource levels within each region are as follows:

- North America: \$58 million and 647 staff per country.
- Asia/Oceania: \$6.9 million and 77 staff per country.
- Europe: \$2.2 million and 34 staff per country.
- Africa/Middle East: \$500,000 and 14 staff per country.
- Central and South America: \$400,000 and 13 staff per country.
- OECD: \$6 million and 50 staff per country.
- Non-OECD: \$500,000 and 17 staff per country.

Executive Summary

Using data supplied by the International Conference of Data Protection and Privacy Commissioners Census 2017, this report finds that the median reported data protection authority budget per country in 2016 was \$1.7 million, while the median reported number of DPA staff working per country was 32. However, several DPAs found in North America, Europe, and Asia/Oceania have budget and staff levels that are orders of magnitude higher than most others. The countries with the highest DPA budgets are the U.S. (\$175 million), Mexico (\$58 million), Germany (\$46 million), Canada (\$45 million), and Italy (\$24 million). Together, these five countries, three of which are in North America, possess about 65 percent of all DPA funding worldwide, while the top 10 countries possess roughly 80 percent. Meanwhile, the list of countries that employ the most DPA staff includes Mexico (867), the U.S. (647), Germany (439), Canada (406), and the United Kingdom (393). More than half (53 percent) of all DPA staff around the globe work in one of these five countries, while approximately 68 percent of DPA staff worldwide work in just 10 countries.

Indeed, we found significant regional disparities in DPA resources. DPAs located in North America report having the highest budgets and most staff, followed in order by Asia/Oceania and Europe. Meanwhile, South and Central America and Africa/Middle East have the lowest DPA budgets and fewest DPA staff per country. By aggregating the results of the ICDPPC Census 2017 with data from the World Bank, countries' DPA budget and staffing levels were found, as expected, to be positively correlated with their gross domestic product (GDP) and population size. In fact, when plotted against national GDP and size of population, it's clear

budget and staffing of DPAs can be explained with a few countries emerging as outliers. In sum, national differences in the amount of resources allotted to DPAs mirror disparities in the global distribution of financial and human capital.

Data and Limitations

The data used in this analysis comes from several primary sources. One is the ICDPPC Census 2017, which all member authorities were requested to complete by April 20, 2017. Follow-up inquiries were also made in November 2017 to several German state DPAs that did not respond to the ICDPPC survey. In total, data on staff and budget were gathered from 90 DPAs, eight of which are located in Africa and the Middle East, seven in Asia and Oceania, 60 in Europe, 12 in North America, and three in South and Central America. Data on gross domestic product and population size were obtained from the World Bank and the CIA World Factbook.

We analyzed responses to two survey questions in particular: (1) "What was your total income for 2016 in your national currency?" and (2) "How many staff are employed by the authority (full-time equivalent employees)?" All currency figures were converted to U.S. dollars using current (September 2017) exchange rates. In countries where multiple authorities operate (i.e., Australia, Canada, Germany, Mexico, Spain, and Switzerland), the budget and staff numbers of the authorities were aggregated.

The <u>regression lines</u> visible in Figures 3-8 present a "best-fit" linear model of the data, representing a series of expected values based on the specifications of the model (i.e., budget as a function of GDP, staff as a function of population) and the observed data. Because different scales are used in

each scatterplot, however, comparing the slopes of different trend lines should be done with caution.

Out of the 87 DPAs that responded to the ICDPPC Census 2017, six did not report budget: Australia's Commissioner for Privacy and Data Protection, Austria's Datenschutzbehoerde, the Council of Europe Data Protection Commissioner, Kosovo's National Agency for Personal Data Protection, Macedonia's Directorate for Personal Data Protection, and the Philippines' National Privacy Commission. The Council of Europe DPA also did not report staff. Moreover, data was collected from only 11 (out of 16) state DPAs in Germany, with the data for several others collected separately via email during November 2017 and representative of budget and staffing levels from 2017. Also, the budget and staff figures provided are lower than the true values for those countries or regions where at least one member DPA did not respond to the survey: Argentina, Australia, Canada, Germany, Mexico, South Korea, Slovenia, and Spain. Lastly, given the wording of the survey questions, the exact percentage of budget and staff devoted by each DPA to privacy and data protection, as distinct from other areas of competency, is unknown.

A few final caveats: The mission, jurisdiction, and scope of subject matter oversight of DPAs differs between nations. For example, France has a

unified oversight system led by a national regulator, the CNIL (Commission nationale de l'informatique et des libertés); whereas Germany distributes oversight between the Federal Commissioner for Data Protection and Freedom of Information, which is responsible for overseeing compliance by federal authorities and other public bodies under federal government control, and 16 state DPAs, who are responsible for supervising the private and public sectors (except telecommunications and postal services companies). Moreover, some DPAs, such as France's CNIL, deal exclusively with data protection, while others, such as the U.K.'s Information Commissioner's Office and the Federal Trade Commission in the U.S., also deal with freedom of information and consumer protection and antitrust, respectively.² Finally, some ambiguity exists over what counts as a DPA. For example, in the U.S., other federal agencies in addition to the FTC oversee sector-specific privacy, such as the Federal Communications Commission (telecommunications), Office for Civil Rights within the Department of Health & Human Services (health care), and the Consumer Financial Protection Bureau (finance). Moreover, in the U.S., state attorneys general have an increasing presence within the privacy enforcement space, fueled by security breach notification legislation and a plethora of state-specific laws.³ For the purposes of this study, however, the definition of a DPA is limited to an organizational member of the ICDPPC.

¹ Country Commissioner for Data Protection and Freedom of Information, Data protection authorities in Germany. https://www.ldi.nrw.de/LDI_EnglishCorner/mainmenu_DataProtection/Inhalt2/authorities/ authorities.php.

² Budget and staffing figures for the ICO used in this report are inclusive of freedom of information activities. Information Commissioner's Office, Income and Expenditure. https://ico.org.uk/about-the-ico/our-information/income-and-expenditure/. Budget and staffing figures for the FTC used in this report are inclusive of consumer protection, but not antitrust. Federal Trade Commission, Fiscal Year 2016 Congressional Budget Justification, 2, 39. https://www.ftc.gov/system/files/documents/reports/fy-2016-congressional-budget-justification/2016-cbj.pdf.

³ See Danielle Keats Citron, The Privacy Policymaking of State Attorneys General, 92 Notre Dame L. Rev. 747 (2016).

The International Conference of Data Protection and Privacy Commissioners' (ICDPPC) Census 2017 reveals large regional disparities in the budget and staffing levels of member authorities.

The results of the ICDPPC Census 2017 indicate that the average per-country data protection authority budget in 2016 was about \$9.5 million. Yet, with a budget of \$175 million devoted to consumer protection, the Federal Trade Commission overshadows all other member DPAs and skews the mean budget result. Importantly, the FTC figures reported in this survey include strictly the agency's consumer protection numbers, without the significant additional budget and staff devoted to antitrust. However, consumer protection includes more than privacy. A detailed breakdown of the FTC budget and staff is found in the agency's annual report to Congress. It is allocated to several divisions covering specific subject areas, including privacy and identity protection, financial services. and marketing and advertising practices, as well as divisions operating across all subject areas, such as enforcement, planning and information, consumer and business education, economic and consumer policy analysis, management, and support. Excluding the FTC, the average DPA budget per country in 2016 was about \$6.5 million. After the U.S., the countries with the largest DPA budgets were Mexico (\$58 million), Germany (\$46 million), Canada (\$45 million), and Italy (\$24 million).

Given the presence of several relatively well-resourced DPAs within the sample, the median, rather than the average, is a better indicator of the budget of a "typical" country's DPA. The median per-country DPA budget of \$1.7 million indicates that half of the reporting countries around the world had DPA budgets above this figure, while half had budgets below this figure.

Meanwhile, reporting countries employed an average of 85 full-time DPA staff in

2016. Here too, with 647 people at the FTC working in consumer protection in 2016, the U.S. is an outlier in the distribution, along with Mexico, which employed 867 DPA staff. After the U.S. and Mexico, the countries that employed the most DPA staff in 2016 were Germany (439), Canada (406), and the United Kingdom (393). Again, however, the median of 32 staff per country provides a better estimate of the number of people working at a typical DPA.

Significant regional disparities can be seen in Table 1, which presents median DPA budget and staff levels per country broken up by geographic region. With a median DPA budget of \$58 million and median DPA staff per country of 647, North America ranks first. Second is Asia/Oceania, which includes Hong Kong, the Philippines, South Korea, Australia, and New Zealand, with a median DPA budget per country of \$6.9 million and median DPA staff of 77. The median DPA budget for countries in Europe in 2016 was about \$2.2 million. Meanwhile, the median number of DPA staff in Europe was 34. In Africa/Middle East and Central and South America, the median DPA budgets per country in 2016 were \$500,000 and \$400,000, respectively, while median DPA staff were 14 and 13, respectively.

Figures 1 and 2 depict these differences in average DPA budget and staff levels per country across these five regions of the world. At about \$93 million, North America also has the highest mean DPA budget per country. Even after excluding the United States, the average DPA budget per country in North America (i.e., Canada and Mexico) still remains higher than any other region in the world, at \$52 million. North America is also the region with highest average DPA staff per country, at 640 DPA full-time employees. The

Asia/Oceania region has the second-highest average DPA budget and staff levels per country. DPAs there have an average budget of \$6.4 million and a staff of about 69 people per country. Europe, which has the highest total number of member DPAs, ranks third regionally, with an average budget of \$5.9 million and average of 65 staff per country. The regions with the smallest average budgets and fewest average staff are South and Central America and Africa/Middle East. respectively. In South and Central America, the average DPA budget per country in 2016 was just under \$350,000. In Africa and the Middle East, the average number of member DPA staff per country was 13.

Further analysis also reveals that countries belonging to the OECD have higher DPA budgets and employ more staff on average than their non-OECD counterparts. Within the OECD, the average DPA budget per country was about \$17 million (\$12 million when excluding the U.S.), while the average number of DPA staff per country was about 142 (125 when excluding the U.S.). By comparison, non-OECD countries have DPA budgets averaging to about \$1 million and employ an average of about 26 DPA staff.

Gross domestic product and DPA budget

To further explain what might account for these large disparities in budget and staffing levels of member DPAs around the world, we combined the ICDPPC data with publicly available data on gross domestic product from the World Bank. Using this aggregate dataset, the GDP for each country was plotted on the x-axis, with that country's total DPA budget on the y-axis. Figures 3 and 4 show the positive relationship between the GDP of an authority's home country and its budget level. As Figure 3 indicates, across the sample, DPAs located in countries with higher GDPs also tend to have higher budgets, as expected. In Figure 4, the United States, which is an outlier in the distribution of GDP, is removed to allow for closer inspection of the other countries. Figure 5 plots national GDP and DPA budgets for only countries in Europe.

Further visual inspection of these plots reveals <u>other outliers</u> in the ratio of national GDP to DPA budget. As Figure 4 reveals, for example, Canada and Mexico both have significantly higher DPA budgets than other countries with similar GDP levels, including

Table 1. Regional variation in median DPA budget and staff per country

	DPAs surveyed	Median per- country DPA budget	Median per-country DPA staff
Region			
North America	12	\$58 million	647
Asia and Oceania	7	\$6.9 million	77
Europe	60	\$2.2 million	34
Africa and the Middle East	8	\$500,000	14
South and Central America	3	\$400,000	13
OECD			
Member	59	\$6 million	50
Non-member	31	\$500,000	17
All	90	\$1.7 million	32

Spain, South Korea, and Australia. France and the United Kingdom have <u>lower DPA</u> <u>budgets than average</u>, given the size of their economies.

Interestingly, this analysis provides additional insight into the significant outlier in the distribution of DPA budget and staffing: the FTC in the U.S. As depicted in Figure 3, the FTC's budget actually appears to be in line with, and even slightly below, what would be expected for a DPA operating in an economy as large as the U.S. Given the typical ratio between a country's GDP and its DPA budget, the U.S. actually resembles most other nations.

Population size and DPA staff

Turning to staffing levels, the size of a country's population can help explain some of the observed disparities. Here too, by combining publicly available population data from the World Bank as well as the CIA's World Factbook with the results of the ICDPPC Census 2017, scatterplots were created depicting the relationship between a country's population size and its number of full-time DPA staff. Figures 6 and 7 reveal the positive relationship between these two variables. (Figure 7 excludes the United States to allow for closer inspection of the remaining countries.) Unsurprisingly, DPAs located in more populous countries also tend to employ more staff. Also, as expected, staff and budget levels are positively correlated with one another. In other words, as the budget of a DPA increases, the number of staff it employs increases proportionally.

Several countries appear to be outliers with respect to the average ratio of population size to DPA staff (represented by the regression line). For example, Canada employs several times more DPA staff than similarly sized countries, including Poland, Spain, Argentina, and Colombia (see Figures 6 and 7). Mexico also employs about nine times more DPA staff than the country closest resembling it in terms of population size, the Philippines. Also, within Europe, although the U.K., France, and Italy are nearly equal in terms of population size, the U.K. employs substantially more DPA staff than its peers (see Figure 8). Moreover, Bulgaria, the Czech Republic, and Germany each employ more DPA staff — with respect to population size — relative to other European DPAs, whereas Austria, Portugal, Romania, Italy, and France each employ less.

Lastly, when population size is accounted for, the United States no longer appears to be an outlier in DPA staff employment. In fact, the U.S. actually employs fewer DPA staff than would be expected for a country of its size.

Conclusion

This analysis of the ICDPPC Census 2017 and supplementary data on GDP and population reveals that national GDP and population size account for a substantial amount of variation in the budget and staffing levels of DPAs around the world. DPAs located in North America, Asia/ Oceania, and Europe have larger budgets and more people working for them, whereas DPAs in Africa, the Middle East, and South and Central America tend to employ fewer staff and have smaller budgets. Although absolute disparities in the DPA budget and staffing levels of ICDPPC members do exist, they can be viewed as simply mirroring the global distribution of financial and human capital.

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Figure 1. Average DPA budget per country by region

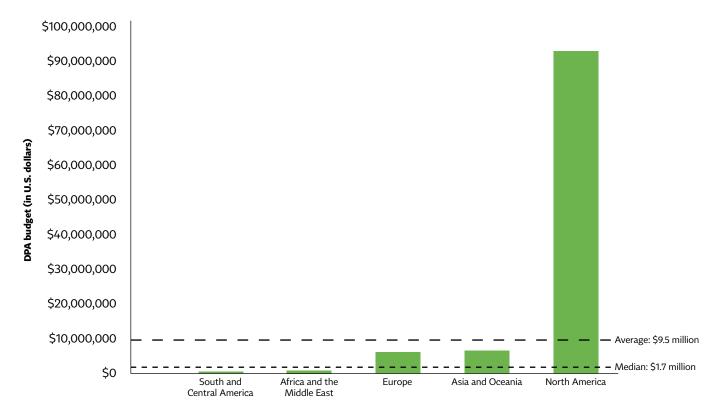


Figure 2. Average number of DPA staff per country by region

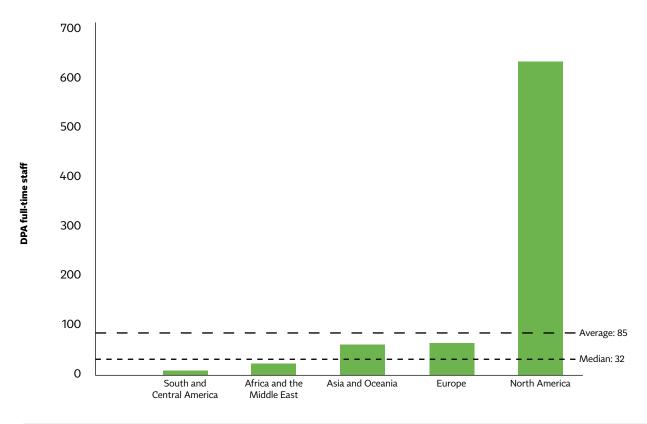


Figure 3. National GDP and DPA budgets (All)

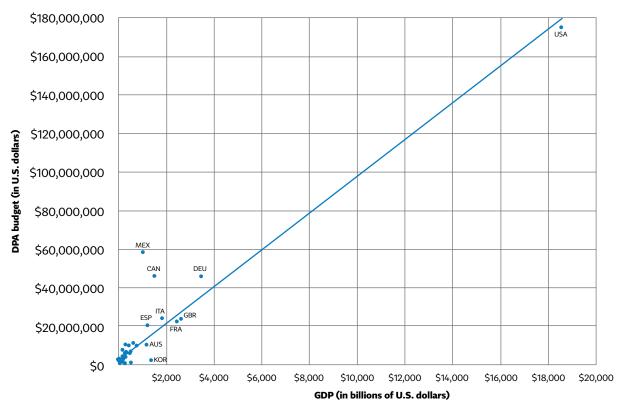


Figure 4. National GDP and DPA budget (All excluding U.S.)

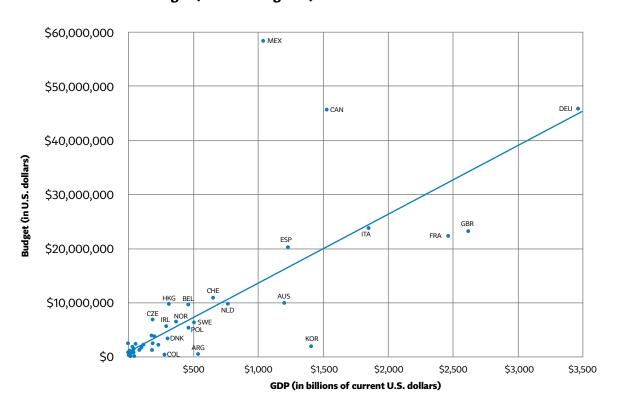


Figure 5. National GDP and DPA budget (Europe only)

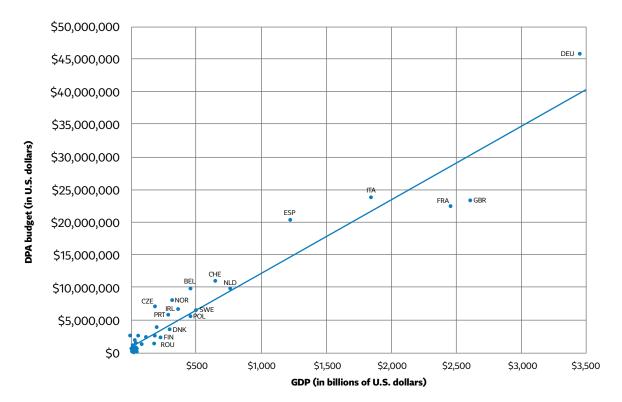


Figure 6. Population and number of DPA staff

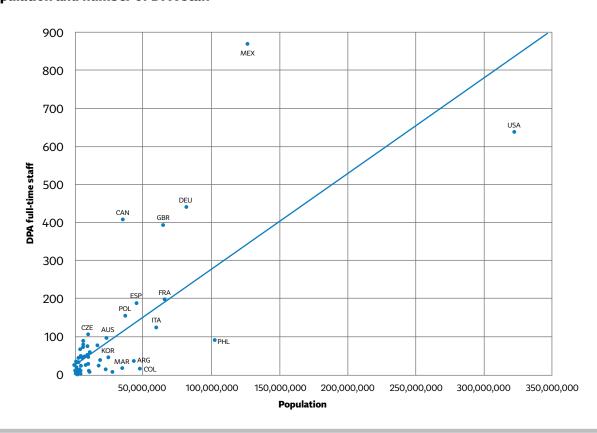


Figure 7. Population and number of DPA staff (excluding U.S.)

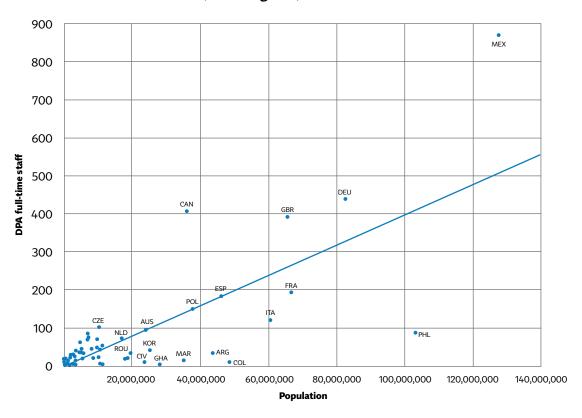


Figure 8. Population and number of DPA staff (Europe only)

