## Exchange rates into USD, 2019

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| **Currency** | 1. **1 USD 2019 =** |
| GBP | 0.788 |
| EURO | 0.879 |
| UGX | 3690 |
| USD | 1 |

Source: US Treasury, <https://www.fiscal.treasury.gov/reports-statements/treasury-reporting-rates-exchange/historical.html> June 2019

## Table 0. Data cleaning

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| # | Variable/indicator | How? | Why? |
|  | Sum\_outcomes\_raw | Sum the proportions in  Outcome\_learningOpportunities  Outcome\_QltyEducation  Outcome\_Systems  Outcome\_other |  |
|  | Outcome\_other | Replace outcome\_other such that  If [1 - sum\_outcomes\_raw > 0], Outcome\_other is Outcome\_other + 1 – sum\_outcomes\_raw | If less than 100% was allocated to the outcomes, the unallocated portion goes to ‘other’. |
|  | Sum\_prog\_raw | Sum the proportions in  Programme\_ECD  Programme\_Primary  Programme\_secondary  Programme\_AcceleratedEducation  Programme\_Skills  Programme\_Systems  Programme\_other |  |
|  | Programme\_other | Replace programme\_other such that  If [1 - sum\_prog\_raw > 0], Programme\_other is Programme\_other + 1 – sum\_prog\_raw | If less than 100% was allocated to the programmes, the unallocated portion goes to ‘other’. |
|  | Sum\_Act\_raw | Sum the proportions in  Activity\_Infrastructure  Activity\_Materials  Activity\_Salary Activity\_training  Activity\_Training\_Children  Activity\_community  Activity\_Strengthening\_District  Activity\_Strengthening\_National  Activity\_piloting  Activity\_other |  |
|  | Activity\_other | Replace Activity\_other such that  If [1 - sum\_Act\_raw > 0], Activity\_other is Activity\_other + 1 – sum\_Act\_raw | If less than 100% was allocated to the activities, the unallocated portion goes to ‘other’. |
|  | Drop dummy projects | Drop any projects for which ‘Should this project be included in analysis’ = No | This removes projects which were from the pilot/testing, and projects which are double counted (because their consortium lead also included them) |

## Table 1. Setting up main indicators

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| # | Variable/indicator | How? | Why? |
|  | Budget\_USD | Convert the Total budget for the duration of the project into USD.  Use the 2019 average exchange rate. Divide the budget by the exchange rate in column A above. | Using 2019 as the average for the years we are looking at (this is a crude but simplifying assumption) |
|  | Spend\_USD | Convert Total spent from project start date to project end date or spending end date, as applicable into USD.  Use the 2019 average exchange rate. Divide the spend by the exchange rate in column A above. |  |
|  | Execution\_rate | Divide Spend\_USD by Budget\_USD | A sense check that they’ve given spend in the correct currency. We won’t use this for any final presentation but some internal QA analysis. |
|  | Months | Calculates total months of project spending – so The final date at which spending is included in your reporting minus Date from which the project was live and spending started, converted into months | Total months of project spending |
|  | Monthly\_spend\_all | Spend\_USD divided by Months | Gives the average spending each month. |
|  | Spent\_0\_all | If the project started before January 2018, then = 6 x Monthly\_spend (i.e. 6 months at the monthly spend)  If the project started before June 2018: = Number of months in 2018/19 FY (e.g. if it starts in Feb 2018, 5 months) x monthly\_spend | These calculate the spend for each year of the ERP. The financial year is July-June. However Year 0 of the ERP was only Jan-June 2018. |
|  | Spend\_1\_all | = Number of months the project was active in FY 18/19 (Year 1) x monthly\_spend  e.g.1. if the project started before July 2018 and ended after July 2019, then  =12 x monthly\_spend  e.g.2. If the project started in November 2018 and finished in 2020 then = 8 x monthly\_spend |  |
|  | Spend\_2\_all | = Number of months the project was active in FY 19/20 (Year 2) (up to/including June 2020) x monthly\_spend | Note that if actual spend goes into July or August 2020, those months do not count towards 2019/20. |
|  | Spend\_3Ys\_all | = Spend\_0\_all + Spend\_1\_all + Spend\_2\_all | Gives total spending in years 0-2 of the ERP. This spending is not specific to ERP activities or ERP districts/geographies. |
|  | Spendprop\_Distlevel\_all | = (A/B) \* C \* D  A = total number of ERP districts (from In which ERP districts does your project work?) Relabel Districts\_RHC  B = How many local governments (e.g. districts or municipalities) does your project work in, in total?) Relabel Districts\_number  C = How focused on refugee hosting subcounties is your spend in the ERP districts?  None=0%  Some = 25%  Half = 50%  Most = 75%  All = 100%  D = proportion of spending at district/school level (from What proportion is at the district/school level?) | Gives the proportion of all spending on refugees/host communities at the district level |
|  | Spendprop\_RHC\_all | = A + B  Where  A = What proportion is at the national level? (relabel Spendprop\_Nat\_all)  B = Spendprop\_Distlevel\_all | Gives the proportion of all spending on refugees/host communities in total (national and district level) |
|  | QA check | Spendprop\_RHC\_all should be less than or equal to 1. |  |
|  | Spend\_RHC\_3Ys\_all | = Spend\_3Ys\_all \* Spendprop\_RHC\_all | Gives the total spending in years 0-2 that is on RHC (i.e. it has adjusted for geographical focus), but not necessarily specific to the ERP |
|  | Spend\_RHC\_3Ys\_ERPspec | = A \* B  Where  A = Spend\_RHC\_3Ys\_all  B = proportion of spending which is ERP specific (ie. question **A.** Of your TOTAL spend to date) | Gives the total spending in years 0-2 that is on RHC and specific to the ERP |
|  | Spend\_RHC\_3Ys\_ERPrel | = A \* B  Where  A = Spend\_RHC\_3Ys\_all  B = proportion of spending on ERP relevant activities (question Of your TOTAL spend to date, what proportion would you estimate relates to activities not included in the ERP? (note the total of this, and your answer to A, cannot be more than 100%) ) | Gives the total spending in years 0-2 that is on RHC and relevant – but not specific - to the ERP |

## Table 2 Details of ERP specific spending

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| # | Variable/indicator | How? | Why? |
|  | ERP specific spending by outcome area |  |  |
|  | Spend\_RHC\_3Ys\_ERPspec\_O1 | = Spend\_RHC\_3Ys\_ERPspec \* Outcome 1  (Increasing equitable access and inclusive relevant learning opportunities) | Gives the total spending in years 0-2 that is on RHC and specific to the ERP, on Outcome 1 |
|  | Spend\_RHC\_3Ys\_ERPspec\_O2 | = Spend\_RHC\_3Ys\_ERPspec \* Outcome 2 (Improving delivery of quality education and training) | Gives the total spending in years 0-2 that is on RHC and specific to the ERP, on Outcome 2 |
|  | Spend\_RHC\_3Ys\_ERPspec\_O3 | = Spend\_RHC\_3Ys\_ERPspec \* Outcome 3 (Strengthening systems for effective delivery) | Gives the total spending in years 0-2 that is on RHC and specific to the ERP, on Outcome 3 |
|  | Spend\_RHC\_3Ys\_ERPspec\_O4 | = Spend\_RHC\_3Ys\_ERPspec \* Outcome\_ Other | Gives the total spending in years 0-2 that is on RHC and specific to the ERP, on Outcome 4 - other |
|  | QA check | Adding the four outcome variables should sum to Spend\_RHC\_3Ys\_ERPspec  (Alternatively check the 4 outcome raw %ages sum to 100% - but this would check that the calculation of the indicators has worked) |  |
|  | ERP specific spending by programme level |  |  |
|  | Spend\_RHC\_3Ys\_ERPspec\_ECD | = Spend\_RHC\_3Ys\_ERPspec \* ECD |  |
|  | Spend\_RHC\_3Ys\_ERPspec\_Prim | = Spend\_RHC\_3Ys\_ERPspec \* Primary |  |
|  | Spend\_RHC\_3Ys\_ERPspec\_Sec | = Spend\_RHC\_3Ys\_ERPspec \* Secondary |  |
|  | Spend\_RHC\_3Ys\_ERPspec\_Acc | = Spend\_RHC\_3Ys\_ERPspec \* Accelerated education |  |
|  | Spend\_RHC\_3Ys\_ERPspec\_Voc | = Spend\_RHC\_3Ys\_ERPspec \* Skills and vocational training |  |
|  | Spend\_RHC\_3Ys\_ERPspec\_Sys | = Spend\_RHC\_3Ys\_ERPspec \* System strengthening |  |
|  | Spend\_RHC\_3Ys\_ERPspec\_PO | = Spend\_RHC\_3Ys\_ERPspec \* Programme\_Other |  |
|  | QA check | Adding the seven programme variables should sum to Spend\_RHC\_3Ys\_ERPspec  (Alternatively check the 7 programme raw %ages sum to 100% - but this would check that the calculation of the indicators has worked) |  |
|  | ERP specific spending by activity type |  |  |
|  | Spend\_RHC\_3Ys\_ERPspec\_IN | = Spend\_RHC\_3Ys\_ERPspec \* Infrastructure |  |
|  | Spend\_RHC\_3Ys\_ERPspec\_MA | = Spend\_RHC\_3Ys\_ERPspec \* Materials |  |
|  | Spend\_RHC\_3Ys\_ERPspec\_TS | = Spend\_RHC\_3Ys\_ERPspec \* Teacher salary |  |
|  | Spend\_RHC\_3Ys\_ERPspec\_TT | = Spend\_RHC\_3Ys\_ERPspec \* Teacher training |  |
|  | Spend\_RHC\_3Ys\_ERPspec\_CH | = Spend\_RHC\_3Ys\_ERPspec \* Training to the children |  |
|  | Spend\_RHC\_3Ys\_ERPspec\_CO | = Spend\_RHC\_3Ys\_ERPspec \* Strengthening school/parent /community structures |  |
|  | Spend\_RHC\_3Ys\_ERPspec\_DS | = Spend\_RHC\_3Ys\_ERPspec \* System strengthening (District) |  |
|  | Spend\_RHC\_3Ys\_ERPspec\_NS | = Spend\_RHC\_3Ys\_ERPspec \* System strengthening (National) |  |
|  | Spend\_RHC\_3Ys\_ERPspec\_PI | = Spend\_RHC\_3Ys\_ERPspec \* Piloting/innovations |  |
|  | Spend\_RHC\_3Ys\_ERPspec\_AO | = Spend\_RHC\_3Ys\_ERPspec \* Activity\_Other |  |
|  | QA check | Adding the 10 activity types together and check it comes to the total. |  |
|  | ERP specific spending by geographic level |  |  |
|  | Spend\_RHC\_3Ys\_ERPspec\_Nat | = Spend\_RHC\_3Ys\_ERPspec \* Spendprop\_Nat\_all / Spendprop\_RHC\_all | Total spend over years 0-2 on RHC and ERP specific activities, at the national level |
|  | Spend\_RHC\_3Ys\_ERPspec\_Dist | = Spend\_RHC\_3Ys\_ERPspec \* Spendprop\_Distlevel\_all / Spendprop\_RHC\_all | Total spend over years 0-2 on RHC and ERP specific activities, at the district level |
|  | QA check | Spend\_RHC\_3Ys\_ERPspec\_Nat + Spend\_RHC\_3Ys\_ERPspec\_Dist should = Spend\_RHC\_3Ys\_ERPspec |  |
|  | ERP specific spending by district |  |  |
|  | Spnd\_RHC\_3Ys\_ERPspec\_Adjumani | If Adjumani is selected  = Spend\_RHC\_3Ys\_ERPspec\_Dist / Districts\_RHC  Otherwise = 0 | Gives the total spend in each ERP district over years 0-2 on RHC and ERP specific activities.  This assumes each ERP district receives the same amount from a donor/within a NGO project |
|  | Spnd\_RHC\_3Ys\_ERPspec\_Arua | If Arua is selected  = Spend\_RHC\_3Ys\_ERPspec\_Dist / Districts\_RHC  Otherwise = 0 |  |
|  | Spnd\_RHC\_3Ys\_ERPspec\_Isingiro | If Isingiro is selected  = Spend\_RHC\_3Ys\_ERPspec\_Dist / Districts\_RHC  Otherwise = 0 |  |
|  | Spnd\_RHC\_3Ys\_ERPspec\_Kampala | If Kampala is selected  = Spend\_RHC\_3Ys\_ERPspec\_Dist / Districts\_RHC  Otherwise = 0 |  |
|  | Spnd\_RHC\_3Ys\_ERPspec\_Kamwenge | If Spend\_RHC\_3Ys\_ERPspec\_Dist / Districts\_RHC Otherwise = 0 |  |
|  | Spnd\_RHC\_3Ys\_ERPspec\_Kikuube | If Kikuube is selected  = Spend\_RHC\_3Ys\_ERPspec\_Dist / Districts\_RHC Otherwise = 0 |  |
|  | Spnd\_RHC\_3Ys\_ERPspec\_Kiryandongo | If Kiryandongo is selected  = Spend\_RHC\_3Ys\_ERPspec\_Dist / Districts\_RHC Otherwise = 0 |  |
|  | Spnd\_RHC\_3Ys\_ERPspec\_Koboko | If Koboko is selected  = Spend\_RHC\_3Ys\_ERPspec\_Dist / Districts\_RHC  Otherwise = 0 |  |
|  | Spnd\_RHC\_3Ys\_ERPspec\_Kyegegwa | If Kyegegwa is selected  = Spend\_RHC\_3Ys\_ERPspec\_Dist / Districts\_RHC  Otherwise = 0 |  |
|  | Spnd\_RHC\_3Ys\_ERPspec\_Lamwo | If Lamwo is selected  = Spend\_RHC\_3Ys\_ERPspec\_Dist / Districts\_RHC Otherwise = 0 |  |
|  | Spnd\_RHC\_3Ys\_ERPspec\_MadiOkollo | If MadiOkollo is selected  = Spend\_RHC\_3Ys\_ERPspec\_Dist / Districts\_RHC  Otherwise = 0 |  |
|  | Spnd\_RHC\_3Ys\_ERPspec\_Obongi | If Obongi is selected  = Spend\_RHC\_3Ys\_ERPspec\_Dist / Districts\_RHC  Otherwise = 0 |  |
|  | Spnd\_RHC\_3Ys\_ERPspec\_Yumbe | If Yumbe is selected  = Spend\_RHC\_3Ys\_ERPspec\_Dist / Districts\_RHC  Otherwise = 0 |  |
|  | QA check | Sum of the Spnd\_RHC\_3Ys\_ERPspec\_[distX] = Spend\_RHC\_3Ys\_ERPspec\_Dist |  |
|  | ERP specific spending by year |  |  |
|  | Spend\_RHC\_Y0\_ERPspec | = A \* B \* C  A = Spent\_0\_all  B = Spendprop\_RHC\_all  C = proportion of spending which is ERP specific (ie. question **A.** Of your TOTAL spend to date) |  |
|  | Spend\_RHC\_Y1\_ERPspec | = A \* B \* C  A = Spent\_1\_all  B = Spendprop\_RHC\_all  C = proportion of spending which is ERP specific (ie. question **A.** Of your TOTAL spend to date) |  |
|  | Spend\_RHC\_Y2\_ERPspec | = A \* B \* C  A = Spent\_2\_all  B = Spendprop\_RHC\_all  C = proportion of spending which is ERP specific (ie. question **A.** Of your TOTAL spend to date) |  |
|  | QA check: | Sum of the Spend\_RHC\_Y0\_ERPspec + Spend\_RHC\_Y1\_ERPspec + Spend\_RHC\_Y2\_ERPspec  = Spend\_RHC\_3Ys\_ERPspec |  |
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## Table 3 Details of Donors and implementers

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| # | Variable/indicator | How? | Why? |
|  | ERP specific spending by outcome area |  |  |
|  | Donor\_category X | = Labels the donor X according to the categories list | Categorises projects by funding type |
| 1. D | Donor\_Summary | If there is only one donor, = donor\_category 1  If there are multiple donors, = ‘Combination’ |  |
|  | Implementer\_category X | = Labels the implementer X according to the categories list | Categorises projects by implementer type |
|  | Implementer\_Summary | If there is only one implementer, = implementer\_category 1  If there are multiple implementers, = ‘Combination’ |  |

## Table 4 Combining government data

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| # | Task | How? | Why? |
|  | Adding the government data |  |  |
|  | Combine the government budget data | Pick up the following:  **Folder**: ERP FinTrack Analysis\raw data  **File**: 1. ERP government budgets 2017-20  **Sheet**: GovtERPspend  **Rows**: 4-33  **Columns**: Match the column names (in row 3) to the columns in the existing analysis.  If we need to restructure the excel sheet – let me know. |  |