



**WORLD BANK GROUP**  
Development Economics Data Group

# **Business Statistics**

## **Unique Business Identifiers (UBI) (within SBR)**

Arthur Giesberts, 2023

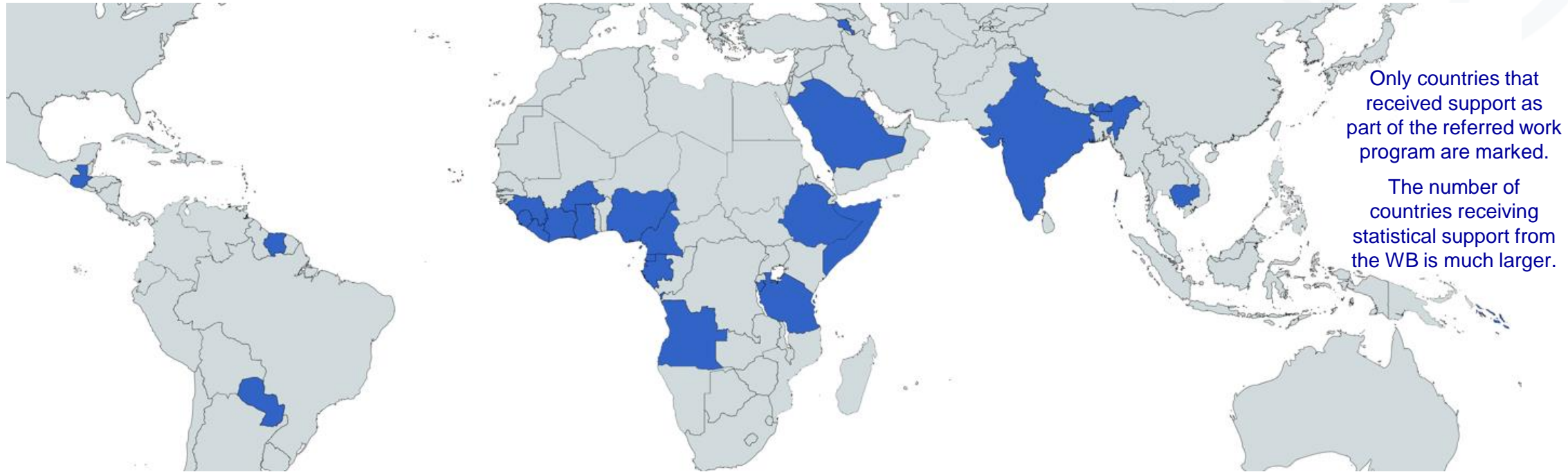


# Support from the World Bank in the field of Business Statistics

- The World Bank supports NSO's in producing official business statistics through an extensive program of financial and technical assistance.
- The immediate outcome of this work program is increased skills and experience within NSO's in the field of business statistics as well as better, timelier and more output.
- Furthermore, the anticipated outcome of this work program is better input to National Accounts (NA) for the sake of 1) improved of NA estimates and 2) as a foundation for the grand and loan program of the World Bank.
- The technical assistance consist among others of 1) providing NSO's with advice on concepts, methods and lean process design and 2) sharing of templates (like questionnaires) and tools (like data collection, data coding, data editing and data imputation software).
- In the technical assistance the focus is on the use of simple, proven and state of the art practices, mostly automated and rule based, as this is the only way to obtain adequate quality, timelines, cost efficiency and sustainability.
- The comprehensive approach of the World Bank is embedded in international standards and requirements and based on worldwide gained experience while working with NSO's.

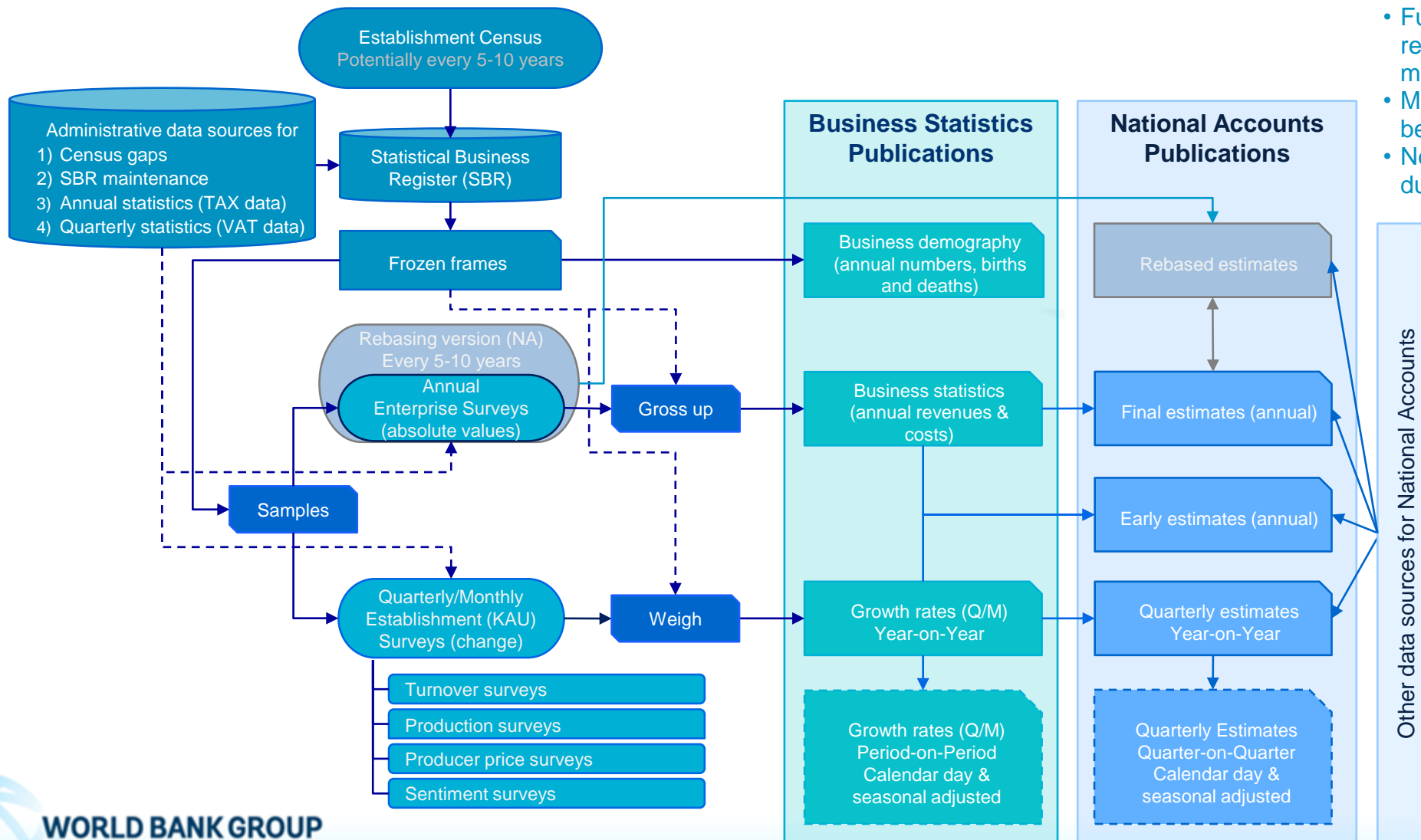
# Country overview of the WB work program in Business Statistics

- Approximately 25 countries have welcomed WB support in Business Statistics in the past years.



- The Covid pandemic seriously affected the actual work program as many activities came to a stand still.
- More than 80% of the countries doesn't have a (adequate) SBR and never conducted an establishment census or didn't do so for a decade or more. Two countries have or work on an administrative data-based SBR.

# Generic NSO work program in Business Statistics and linkage with National Accounts



## Notes regarding this work program:

- Full implementation of this work program requires multiple years and a growing maturation of the NSO.
- Meanwhile, please note the implementation can be gradual and with increasing detail.
- Nevertheless, it is permanent work-in-progress due to the changing economy and requirements.

← Business demography: Implementation initially requires data for 1 period only

← Business statistics: Implementation initially requires data for 1 period only

← Regular short-term statistics: Initial implementation requires data for 13 months or 5 quarters

← Adjusted short-term statistics: Implementation requires data for 5+ years, especially after Covid

# Show casing Sierra Leone 1/3

- Statistics Sierra Leone was recently supported in conducting an establishment census to improve their SBR, their Business Statistics and their National Accounts.
- Key outcomes of the approach were (for more details see [link 1](#) and [link 2](#)):
  - Over 165,000 establishments were identified and registered, of which:
    - More than 48,000 formal/substantial establishments
    - More than 117,000 informal/micro establishments
  - Please note:
    - During the previous establishment census in 2016 – with a different scoping and methods – about 18,000 establishments were registered
    - The SBR that was used as the frame for the 2019 annual economic survey contained about 15,000 entities
  - Some other findings:
    - approximately 70% of the establishment has trade (G) as main activity and 12% manufacturing (C).
    - About 51% of the establishments exist 5 years or more (this also applies to the informal sector establishments)
    - In about 65% of the informal establishments the working person is female, 16% male and 20% mixed
  - Some UBI related findings
    - Of the formal establishments about 2% reported that they are registered at the “Office of Administrator And Registrar General”, about 11% at the “National Revenue Authority” and about 1% at the “Corporate Affairs Commission”; Of the establishments registered at the “National Revenue Authority” about a third provided the actual registration number.

## Show casing Sierra Leone 2/3

### Next steps:

- Publication of a more comprehensive census report (with establishment as statistical entity)
- Use census data to populate a new SBR; this requires:
  - Aggregating branch establishments into enterprises → a UBI clearly would help
  - Linking establishments of the old SBR to the new SBR → a UBI clearly would help
- Use admin data to add industries that are hard to cover in an establishment census → a UBI clearly would help
- Use admin data to identify entities which were missed in the establishment census → a UBI clearly would help
- Add industries that are hard to cover in an establishment census → a UBI clearly would help
- Publication of business demography based on new SBR (with enterprise as main statistical entity)
- Annual economic surveys (and/or short-term survey) based on samples from new SBR → a UBI is essential
- Using admin data complementary to or as verification for survey data → a UBI clearly would help

## Show casing Sierra Leone 3/3

Key elements of the approach in Sierra Leone where:

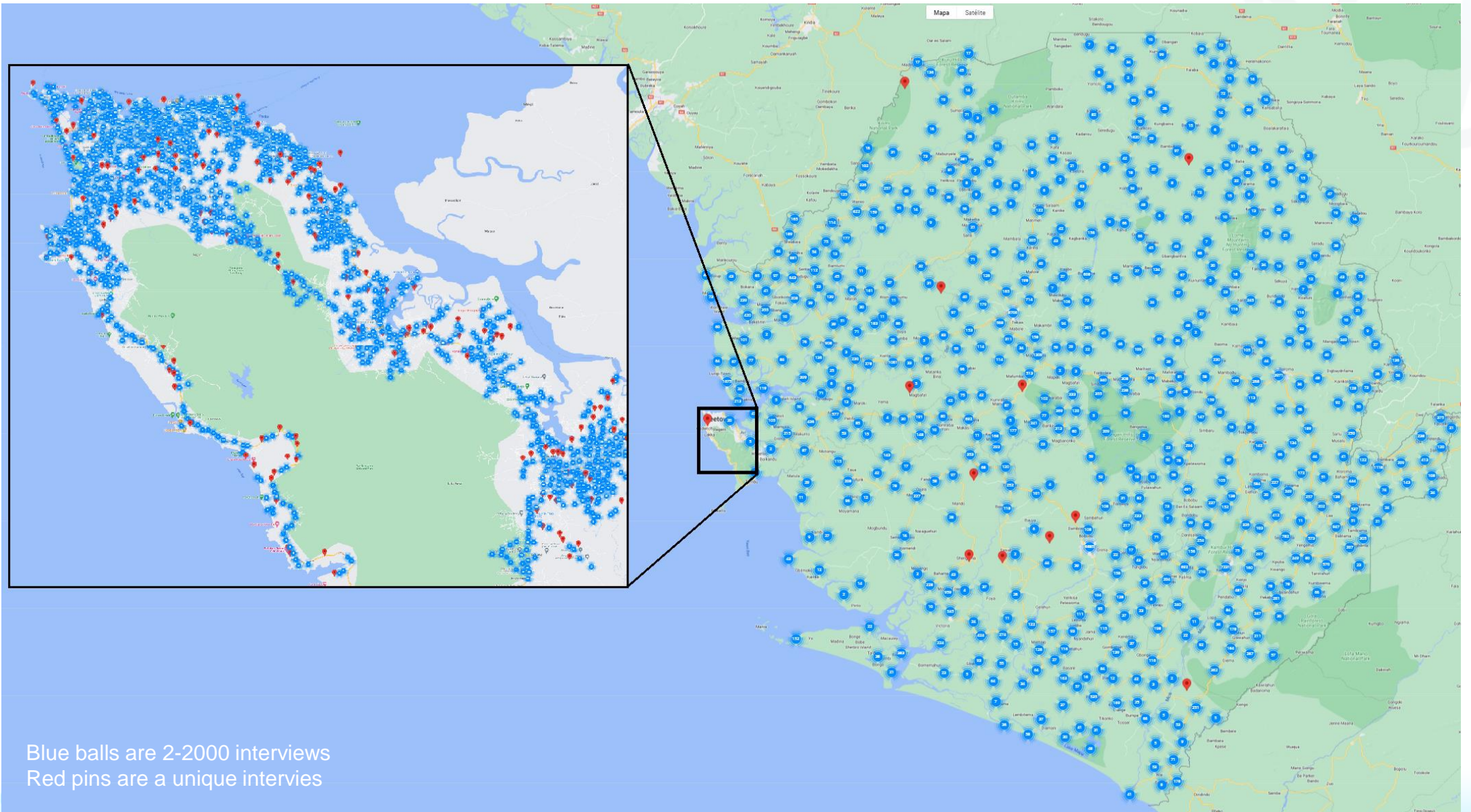
- Routings in the questionnaire for closed, hesitating and refusing establishments to maximize exhaustiveness
- Lean and inclusive digital questionnaire: covering the formal and informal sector (because it is very large)
- For informal sector establishments no contact or address details were captured, apart from GPS because:
  - It is (close to) private (sensitive) data
  - It is time consuming and costly given the size of the informal sector
  - Unique sampling of these entities for future surveys is not required. There is no real reason to find the exact same entity back: It is recommended to decide on sample size per strata and pick any while walking around for the survey among the formal (unique) entities.
  - Furthermore, normally speaking admin data won't be available for those entities.

Basically, this implies that no explicit UBI is needed for these entities, unless useful internally at the NSO. This might be the case because many of those have no name or other identifier than 1) original GPS, 2) privacy sensitive data like name or telephone of the own account worker, which is either not captured or limited in its use.

Meanwhile the number of informal establishments as well as their lifespan is often severely under estimated.



# Overview of coverage of Sierra Leone census (Screenshots from Survey Solutions tool)





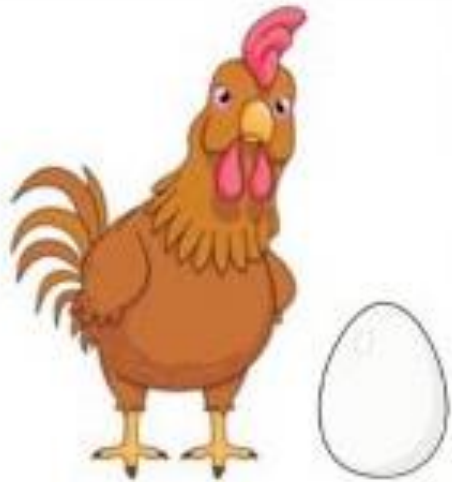
## In a perfect world



- Each business has a number or is related to a number from its start; irrespective their size, age, formality, industry, etc.
- The number is known and used for all communication and data exchange; everyone agrees to the usefulness of such a number and maintains and uses it accordingly
- There is a commonality among countries in syntax and use of the numbers; this allows for cross country aggregation, migration, consistency checks, etc.
- There are simple and generic solutions for changes a business may undergo; examples are growth, mergers, split ups, relocation, etc.

## In a less than perfect world

### Chicken or the Egg



Which came first,  
the chicken  
or  
the egg?

Such a number doesn't exist yet, partly because:

We can give businesses a UBI if we can identify them.

When we have the UBI we can identify the business.

The lesson is that we need to start somewhere with identifying businesses or defining UBI's and linking them.

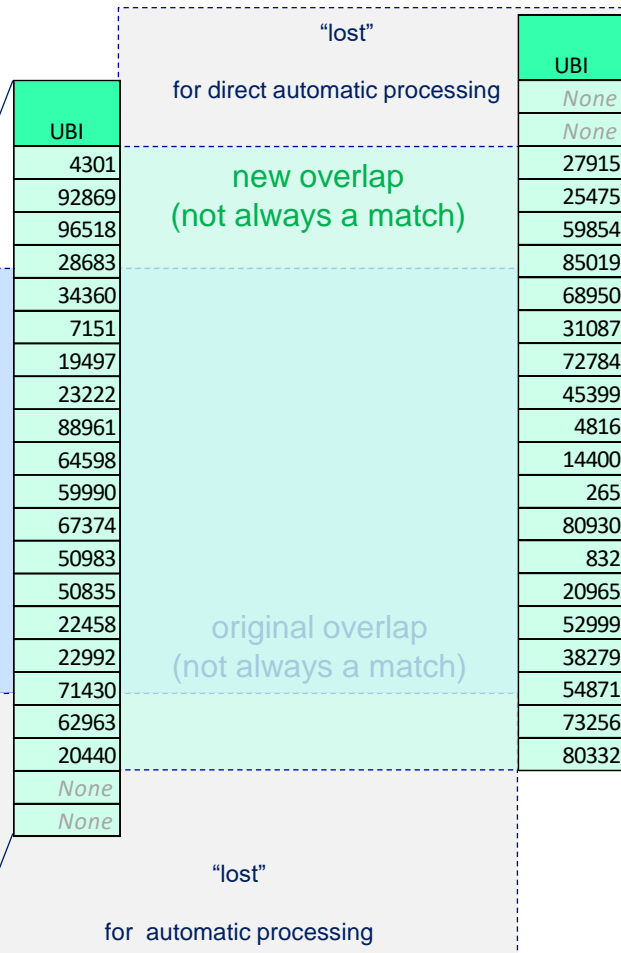
Meanwhile there are many questions, challenges and options?

# In summary what we want

Assumed advantage of adding UBI

Data source 1

Variables	Variables	Variables	Size class	ISIC	Name	TAX ID or other ID
734	37457	50164	I	None	abc	28132
925	81835	908	IV	None	def	48716
872	43775	37387	II	None	ghi	14753
178	94288	14322	V	None	jkl	35467
851	20800	2927	III	None	mno	43255
391	76671	94366	I	None	pqr	2197
695	46143	30412	II	None	stu	75072
157	51946	9839	I	None	vwx	77996
579	20925	84034	IV	None	ghi	95410
181	11937	44272	II	None	abc	11488
808	56329	35567	V	None	abc	19574
688	99862	86957	III	None	def	37602
144	78015	98630	I	None	ghi	44989
441	6427	81124	II	None	jkl	None
881	37707	88122	I	None	mno	None
676	24471	45145	IV	None	pqr	None
894	97481	44739	II	None	stu	None
479	37585	20714	V	None	vwx	None
808	11414	78666	III	None	abc	None
330	54671	98535	V	None	def	None
196	63882	86875	III	None	ghi	None



Data source 2

TAX ID or other ID	Name	ISIC	Size class	Variables	Variables	Variables
None	abc	6566	I	492	47183	11066
None	def	6108	IV	751	76628	84361
None	ghi	7074	II	872	51150	36247
None	jkl	4930	V	390	15206	53571
None	mno	7472	III	333	62967	30797
None	pqr	6408	I	915	9450	68587
None	stu	9156	II	741	24372	96989
None	vwx	7051	I	508	76206	90604
38873	ghi	3117	IV	718	36897	450
97107	abc	9645	II	264	16071	76682
69584	abc	2002	V	739	72572	12612
40359	def	7163	III	639	63459	82794
58044	ghi	9318	I	953	91970	75721
97116	jkl	2870	II	115	4722	61963
69364	mno	7517	I	929	42008	68539
47053	pqr	9634	IV	964	98523	18526
54533	stu	4231	II	194	93109	9213
75733	vwx	3098	V	196	73992	95983
39548	abc	8664	III	969	22147	25400
83039	def	6145	V	412	70004	95976
61244	ghi	4333	III	419	97205	13716

UBI should increase the potential overlap by having more records that are numbered

# What exists already? And could be used to solve uniqueness requirement?

## A. Common examples:

- Apart from implicit (or explicit) ID assigned by statistical office
- Tax ID of enterprises
- Commercial license or ID of enterprises
- Import/export license or ID of enterprises
- Other registration ID's

## B. Alternatives for formal enterprises

- Website name
- Email address (especially the ...@enterprise-name.com portion)
- Phone numbers (land lines where better for this)

## C. Alternatives for informal enterprises

- Income Tax ID of key natural persons (like founder, owner or director)
- Recoded telephone numbers (one way encrypted)

## D. Out of the box

- Utility bill numbers: like electricity bills: Please note, a distinction may exist in business accounts and households and by size of connection
- Bank account numbers
- GPS coordinates
- Time stamp of founding

## What are limitations of potential existing variables:

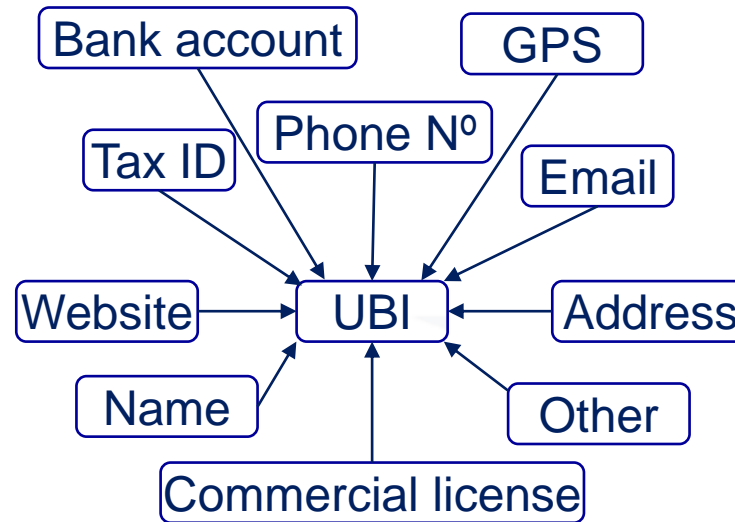
- None of the examples has a complete coverage of business in a country
- None of the examples are uniform/universal across countries
- None of the examples easily covers the hierarchy of enterprises (groups)
- Large differences in informality across countries
- Large differences in preparedness to share data across countries
- Nothing works both for formal and informal
- The NSO is not the owner of these variables
- The existing variables often have a disclosing nature (while a NSO would like to identify enterprises in a non disclosing manner)
- The existing variables may be less adequate (insufficiently standardized) to share data among countries

## What are benefits of a true NSO assigned UBI

- Such a UBI is the least sensitive identifier,
- partly as it is assigned for statistical purposes only,
- by an organization without an own agenda,
- and therefore there may be less reluctance to share,
- also, because such an UBI could overcome privacy issues of other some variables

# Should UBI be just another number or should it be another approach (“profiling” type 2)

Variable	Type	Length
Stats ID	Alfanumeric	8
TAX ID	Alfanumeric	9
Legal ID	Alfanumeric	7
Name	Alfanumeric	256
Address	Alfanumeric	256
Phone	Alfanumeric	10
Email	Alfanumeric	48
Website	Alfanumeric	48
ISIC	Alfanumeric	4
Size class	Alfanumeric	1
UBI	Alfanumeric	9



UBI	Type	Detail	Date
12345	Website	<a href="mailto:sun@world.com">sun@world.com</a>	2023
12345	TAX ID	64362	2019
12345	Legal ID	491	1989
12345	Name	Sunset shop	2001
12345	Address	Rue 13	1998
12345	Phone	323-234167	2013
12345	Email	<a href="mailto:A@b.com">A@b.com</a>	2017
9876	TAX ID	352	2019
9876	Phone	11-23523	2011
9876	Email	<a href="mailto:m@gmail.com">m@gmail.com</a>	2014
733	Website	<a href="mailto:moon@world.com">moon@world.com</a>	2023
733	TAX ID	801129	2019
733	Legal ID	4415	1989



## Main questions or challenges

- Who is assigning the number (the NSO would be the best candidate/recommended entity)
- When is the number assigned in the life cycle (appearance) of the enterprise
- What is the ground of assigning an UBI in terms of entity and event: What should be the coverage in terms of industries, institutional sectors (including informal)
- Who assigns the number for cross country enterprises
- What change of an enterprise would lead to changing the number (cancelling the old number)
- How to communicate and work around canceled numbers
- What is the best syntax (probably a sequential meaningless number)
- How to ensure that the number is known and used outside the NSO environment → key challenge
- Would a 20-80 rule work, as a start or has final target
- Decide on a prescriptive strategy or a facilitating strategy
- Would a UBI help significantly in supply chain or global value chain analysis
- How to come to a universal approach
- How to make universal progress

# Some recommendations

- Provide guidance to NSO to:
  - avoid reinventing the wheel in each country
  - avoid common mistakes or deficiencies/make use of best practices:
    - Meaningful syntax may seem to have advantages, initially, but later it may cause inconsistencies or limitations
    - Sequential is easier to implement among multiple agencies than pure random numbers
    - Sequential makes it possible to roughly distinguish between/trace older and newer businesses
    - Training in concepts, relevance and IT skills related to UBI
  - allow for scaling up of the syntax (e.g. to super national coding (by simply adding country codes))
- Consider to store meta data and para data on Unique Business Identifier
  - When was number created
  - Who created the number
  - Linkages to other identifiers of the entity
- For linking, concentrate more on telephone numbers, email address and websites for identifying entities as those are often more adequate than enterprise names of physical addresses as those often are written or spelled differently or contain typing mistakes.
- Define milestones/maturity stages to guide, monitor and stimulate NSO's progress

# Nice transparency examples from Angola

- Sign boards contain phone numbers, email, website, social media accounts or even TAX id.



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**THANK YOU**