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**Codebook of
Historical Database
on Maternity Leave
(HDML)**



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CODEBOOK OF HISTORICAL DATABASE ON MATERNITY LEAVE (HDML)

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Petra Buhr, Sonja Drobnič, and Johannes Huinink

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SUMMARY

The Historical Database on Maternity Leave (HDML) provides data on paid maternity leave policies in 164 independent nation states² with a population of more than 500,000 during the period from 1884³ until 2018. The original purpose of this dataset is to examine whether international standards of ILO Maternity Protection conventions influence the historical development of maternity policy in nation states. Since the standards of ILO Maternity Protection conventions are composed of the amount of benefit, duration of benefit, legal coverage, and financing, this database contains domestic standards for these four variables.

This codebook contains details of the HDML to facilitate understanding of the database for interested users and to provide transparency of the data collection. Based on this codebook, we expect that users will be able to apply this dataset for their own research purposes. In general, we have two sets of indicators. The first set of indicators was preprocessed by our research group to be suitable for analyses. The coding of the second set of indicators was kept as close as possible to the original wording of national legislation texts to provide users a more detailed overview of the conditions of paid maternity leave. These indicators

2 This database includes only independent entities. This means that post-colonial, post-USSR, post-Yugoslav and other types of dependent countries are included in the dataset at the time of their independence. Consequently, the entries from USSR, Yugoslavia, East/West Germany and similar cases cease to exist when states split or collapse. Yugoslavia is coded as Serbia and USSR as Russia due to standardization of country codes.

3 In 1884, Germany introduced the first paid maternity leave worldwide.

require additional preprocessing before being suitable for the users' analyses and are thus aimed at a more advanced audience. In Appendix 2, we introduce a manual for extracting information from the HDML indicators using regular expressions.

This database was collected within the project **Formation and Diffusion of Family Policy in a Global Perspective**, a project of the Collaborative Research Center 1342 "Global Dynamics of Social Policy". The project is funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) – Project number 374666841 – SFB 1342 from 2018 until 2021. We also appreciate the excellent research assistance from Katrin Kleemann.

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1. INTRODUCTION

1.1. Basic information

1.1.1 DATA AVAILABILITY

- » **Countries:** independent state with a population of more than 500,000 whose information has been regularly updated in either Social Security Programs throughout the World (SSPTW) or ILO Legislative series.
- » **Year:** maximum 1884-2018

The HDML provides the general information on paid maternity leave with the temporal and spatial coverage that is shown in the table below without missing values. Contingent on territorial change in each independent state, some states enter the dataset earlier than others do and some states exit the dataset before 2018 if they collapsed or split. Since we do not assume that post-colonial states and successor states of a predecessor state, e.g. Yugoslavia, were suddenly founded in the year of their independence, we coded the paid maternity leave programs that were adopted before their independence until they adopt the first paid maternity leave reform since their independence. Table 1 provides an overview of the history of independent states.

Table 1. Overview of the history of independent states

Country Name	COW code	Period of independence	Related Entity
Afghanistan	700	1919-2018	
Albania	339	1914-2018	
Algeria	615	1963-2018	France
Argentina	160	1841-2018	
Armenia	371	1992-2018	U.S.S.R
Australia	900	1920-2018	
Austria	305	1816-2018	
Azerbaijan	373	1992-2018	U.S.S.R
Bahrain	692	1971-2018	United Kingdom

Country Name	COW code	Period of independence	Related Entity
Bangladesh	771	1972-2018	Pakistan
Belarus	370	1992-2018	U.S.S.R
Belgium	211	1830-2018	
Benin	434	1960-2018	France
Bolivia	145	1848-2018	
Botswana	571	1966-2018	United Kingdom
Brazil	140	1822-2018	Portugal
Brunei	835	1984-2018	United Kingdom
Bulgaria	355	1908-2018	
Burkina Faso	439	1960-2018	France
Burundi	516	1962-2018	Belgium
Cambodia	811	1955-2018	France
Cameroon	471	1960-2018	France
Canada	20	1920-2018	
Cape Verde	402	1975-2018	Portugal
Central African Republic	482	1960-2018	France
Chad	483	1960-2018	France
Chile	155	1839-2018	
China	710	1860-2018	
Colombia	100	1831-2018	
Comoros	581	1975-2018	France
Congo	484	1960-2018	France
Costa Rica	94	1920-2018	
Croatia	344	1991-2018	Yugoslavia
Cuba	40	1902-2018	
Cyprus	352	1960-2018	United Kingdom
Czech Republic	316	1993-2018	Czechoslovakia
Czechoslovakia	315	1918-1992	
Democratic Republic of the Congo	490	1960-2018	Belgium
Denmark	390	1816-2018	
Djibouti	522	1977-2018	France
Dominican Republic	42	1894-2018	
Ecuador	130	1854-2018	
Egypt	651	1937-2018	United Kingdom
El Salvador	92	1875-2018	
Equatorial Guinea	411	1968-2018	Spain
Estonia	366	1992-2018	U.S.S.R
Ethiopia	5303	1898-2018	
Fiji	950	1970-2018	United Kingdom
Finland	375	1917-2018	
France	220	1816-2018	
Gabon	481	1960-2018	France
Gambia	420	1965-2018	United Kingdom

Country Name	COW code	Period of independence	Related Entity
Georgia	372	1992-2018	U.S.S.R
German Democratic Republic	265	1950-1989	
German Federal Republic	260	1950-1989	
Germany	255	1816-1945, 1990-2018	German Democratic Republic; German Federal Republic
Ghana	452	1960-2018	United Kingdom
Greece	350	1828-2018	
Guatemala	90	1868-2018	
Guinea	438	1958-2018	France
Guyana	110	1966-2018	United Kingdom
Haiti	41	1859-2018	
Honduras	91	1899-2018	
Hong Kong, China	91	1899-2018	
Hungary	310	1816-2018	Austria-Hungary
India	750	1950-2018	United Kingdom
Indonesia	850	1949-2018	Japan
Iran	630	1855-2018	
Iraq	645	1932-2018	United Kingdom
Ireland	205	1922-2018	United Kingdom
Israel	666	1948-2018	United Kingdom
Italy	325	1816-2018	
Ivory Coast	437	1960-2018	France
Jamaica	51	1962-2018	United Kingdom
Japan	740	1860-2018	
Jordan	663	1946-2018	United Kingdom
Kazakhstan	705	1992-2018	U.S.S.R
Kenya	501	1963-2018	United Kingdom
Kiribati	946	1999-2018	United Kingdom
Kuwait	690	1961-2018	United Kingdom
Kyrgyzstan	703	1992-2018	U.S.S.R
Laos	812	1954-2018	France
Latvia	367	1920-1939, 1992-2018	U.S.S.R
Lebanon	660	1946-2018	France
Lesotho	570	1966-2018	United Kingdom
Libya	620	1951-2018	United Kingdom
Lithuania	368	1920-1939, 1992-2018	U.S.S.R
Luxembourg	212	1920-2018	
Madagascar	580	1960-2018	France
Malawi	553	1964-2018	United Kingdom
Malaysia	820	1957-2018	United Kingdom
Mali	432	1960-2018	France
Mauritania	435	1960-2018	France

Country Name	COW code	Period of independence	Related Entity
Mauritius	590	1968-2018	United Kingdom
Mexico	70	1831-2018	
Mongolia	712	1924-2018	
Morocco	600	1956-2018	France
Myanmar	775	1948-2018	United Kingdom
Namibia	565	1990-2018	South Africa
Nepal	790	1920-2018	
Netherlands	210	1816-2018	
New Zealand	920	1920-2018	United Kingdom
Nicaragua	93	1900-2018	
Niger	436	1960-2018	France
Nigeria	475	1960-2018	United Kingdom
Norway	385	1905-2018	
Oman	698	1971-2018	
Pakistan	770	1947-2018	United Kingdom
Panama	95	1903-2018	
Paraguay	150	1846-2018	
Peru	135	1839-2018	
Philippines	840	1946-2018	United States
Poland	290	1918-2018	
Portugal	235	1816-2018	
Qatar	694	1971-2018	United Kingdom
Romania	360	1878-2018	
Russia ¹	365	1816-1921, 1992-2018	U.S.S.R
Rwanda	517	1962-2018	Belgium
Samoa	990	1976-2018	
Sao Tome and Principe	403	1975-2018	Portugal
Saudi Arabia	670	1927-2018	
Senegal	433	1960-2018	France
Serbia ²	342	1921-2018	Yugoslavia; Serbia and Montenegro
Seychelles	591	1976-2018	United Kingdom
Sierra Leone	451	1961-2018	United Kingdom
Singapore	830	1965-2018	United Kingdom
Slovakia	317	1993-2018	Czechoslovakia
Slovenia	349	1991-2018	Yugoslavia
Solomon Islands	940	1978-2018	United Kingdom
Somalia	520	1960-2018	Italy
South Africa	560	1920-2018	United Kingdom
South Korea	732	1949-2018	Japan
Spain	230	1816-2018	
Sri Lanka	780	1948-2018	United Kingdom
Sudan	625	1956-2018	United Kingdom

Country Name	COW code	Period of independence	Related Entity
Swaziland	572	1968-2018	United Kingdom
Sweden	380	1816-2018	
Switzerland	225	1816-2018	
Syria	652	1946-2018	France
Taiwan	713	1949-2018	
Tajikistan	702	1992-2018	U.S.S.R
Tanzania	510	1961-2018	United Kingdom
Thailand	800	1887-2018	
Togo	461	1960-2018	
Trinidad and Tobago	52	1962-2018	United Kingdom
Tunisia	616	1962-2018	France
Turkey	640	1816-2018	
Turkmenistan	701	1992-2018	U.S.S.R
Uganda	500	1962-2018	United Kingdom
Ukraine	369	1992-2018	U.S.S.R
United Arab Emirates	696	1971-2018	United Kingdom
United Kingdom	200	1816-2018	
United States of America	2	1816-2018	
Uruguay	165	1882-2018	
Uzbekistan	704	1992-2018	U.S.S.R
Vanuatu	935	1981-2018	United Kingdom
Venezuela	101	1841-2018	
Vietnam	816	1954-2018	France
Yemen	679	1990-2018	Yemen Arab Republic; Yemen People's Republic
Zambia	551	1964-2018	United Kingdom
Zimbabwe	552	1965-2018	United Kingdom

[1] Russia (1922-1991) = U.S.S.R (1922-1991)

[2] Serbia (1921-2001) = Yugoslavia (1921-2001), Serbia (2002-2005) = Serbia and Montenegro (2002-2005)

1.1.2 DEFINITION OF MATERNITY LEAVE

This dataset defines maternity leave as a public⁴ paid leave program that is available to mothers with the temporal condition “before and after childbirth”, functioning as social protection that guarantees the income of individuals during this period. If a country combines childcare leave and maternity leave into one parental program without any additional maternity leave programs existing, we also code such parental leave programs as maternity leave.

There are disagreements about the inclusion of such parental leave programs, as some databases do not acknowledge paid parental leave providing benefits to both fathers and

4 We also included voluntary/mandatory private paid maternity leave if the program covers the majority of the population as in the cases of Sweden (voluntary private insurance: 1913-1930) and Switzerland (voluntary private insurance before 1965; mandatory private insurance 1965-2004) in the early stage of maternity protection development. However, we do not include corporate-based private paid maternity protection as in the cases of the United States of America where only a small part of the population is covered.

mothers as maternity leave. For instance, Anne H. Gauthier codes only maternity leave programs that exclusively target women as maternity leave in her dataset “Comparative Family Policy Database”. Her coding indicates that Sweden does not have paid maternity leave since 1974, while the OECD Family policy database recognizes that the paid parental leave in Sweden functions as paid maternity leave. According to this stricter definition, Australia and New Zealand would never have adopted paid maternity leave. We opted for a more generous definition, because we expect that without any comprehensive information on parental leave, the generous definition of maternity leave provides a better overview of the historical development of maternity leave in the world.

1.1.3 CASES OF MULTIPLE PARALLEL MATERNITY LEAVE PROGRAMS

Since the unit of the HDML is country-years, every country should have only one entry per year. However, in reality most countries have more than one paid maternity leave scheme. In case of multiple parallel maternity leave programs, HDML codes the amount of benefit, duration of benefit and financing of a major program that covers the standard group (presumably, largest population). Appendix 1 shows the rules for choosing standard groups and the list of standard groups in each country. However, it codes the aggregated coverage from multiple parallel programs to give a general overview of coverage of paid maternity leave in a nation state.

2. VARIABLES

We strongly recommend users to download all variables from WeSIS whose names start with “fam_mat_leave_” and end with “_own”. Our research group built a template for these variables during the process of data collection to provide a comprehensive overview of paid maternity leave in the world. While the variables like duration of paid maternity leave or amount of maternity benefit would be a great foundation for statistical analysis, the informative variables like form of benefit and year of enforcement of major maternity leave reforms help users understand the other variables better.

- » **Year of enactment of major maternity leave reforms (fam_mat_leave_year_enact_own)**
- » **Year of enforcement of major maternity leave reforms (fam_mat_leave_year_enforce_own)**

There can be a one or two-year gap between the year of enactment and enforcement. We code cases in which a legislation regarding paid maternity leave has been enacted but not enforced as “never went into force”, e.g. South Korea (Labour Standards Law, Act No. 286, dated 10 May 1953), Nigeria (National Provident Fund Act No. 20, 1961), and Pakistan (The Employees’ Social Insurance Ordinance XXII of 1962). Cases in which a paid maternity law has been abolished, e.g. Malaysia (Employment Ordinance No. 38, dated 27 June 1955) are coded as “abolished”.
- » **Name of legislation (fam_mat_leave_law_name_own)**

In case of multiple parallel maternity schemes or more than one related legislations, we connected the names of the laws with “;”.
- » **Form of benefit (fam_mat_leave_type_own)**

(e.g. cash benefit, medicare, unpaid leave, paid leave, partly-paid leave, in kind, layette, social assistance, universal cash benefit)

In general, only paid leave will be included in the HDML. If cash benefit is provided as a lump sum, we aggregate two different types of benefit, e.g. paid leave + medicare. Medicare comes either in the form of service in public hospital or cash benefit.

Originally:

Benin (1963): cash benefit, 100 % of earnings, lump sum

Benin (1963): paid leave, 60 % of earnings, 12 weeks

Merged result:

Benin (1963): paid leave + cash benefit, 60 % of earnings, 12 weeks

- » **Duration of paid maternity leave (in original units) (fam_mat_leave_dur_paid_own)**
This variable provides detailed information about the length of paid maternity leave, preserving the original coding from national legislation texts as much as possible. It requires preprocessing to extract the required information for cross-sectional analysis. The unit of this variable varies from day to year. It contains not only the total length of paid maternity leave but also the temporal conditional length of maternity leave, i.e. certain weeks before and after childbirth if a maternity protection law specifies them. The user can capture such information using the regular expression, "digit weeks; digit weeks before; digit weeks after".

In some cases, a range for the duration is provided. If the duration of leave differs along the period of contributions of beneficiaries or the occupational groups of beneficiaries, we code the range of durations in the format "digit – digit duration", e.g. 12 – 14 weeks. In these cases, the "comment" or "comment2" column provides information about the conditions for varying durations of benefit.
- » **Duration of maternity benefit (in original units) (fam_mat_leave_dur_ben_own)**
The logic of this variable is the same as the "duration of paid maternity leave" variable. However, this indicator measures the length of maternity "benefit" instead of "leave". In case of only partly paid leave programs, the duration of benefit will not be identical with the duration of leave. For instance, the duration of benefit for 6 weeks unpaid leave would be 0 weeks, while duration of leave would be coded as 6 weeks. If the program provides only cash or in-kind benefits, the duration of benefit will be coded as a missing value. In case of lump sum payments, it is coded as "lump sum" instead of the length of the benefit.
- » **Duration of maternity benefit (in weeks): (fam_mat_leave_dur_ben_own2)**
In most cases, we converted 7 days to a week, unless national legislations or other existing databases indicate that only weekdays should be counted.
- » **Amount of maternity benefit (in original units) (fam_mat_leave_amount_own)**
This variable provides detailed information about the amount of maternity benefit, preserving the original coding from national legislation texts as much as possible. Most of the entries are coded as "digit % of earnings". However, a few cases are coded as flat rates, minimum wages, or in kind.

» **Amount of maternity benefit (in replacement rate) (fam_mat_leave_amount_repl_own)**

We extracted the replacement rate, i.e. the percentage of prior wage, from the “amount of maternity benefit (in original units)”. In case of flat rates or minimum wages, we standardized these cases into a replacement rate based on other existing databases. However, we did not find relevant information to convert the absolute values to replacement rates in the following examples, which are coded as “0.99” instead:

Bangladesh (1939-1950): amount depends on prior wage
Bulgaria (1924): 12 leva per day
China (1923-1929): allowance
Czechoslovakia (1948): 15 – 159 Czechoslovak koruna per day
Denmark (1892-1913): unknown
Fiji (1975-1995): 1 – 5 Fiji dollars a day
France (1913-1935): 0.5 – 3 franc a day
Hungary (1891-1907): equal to sick pay
India (1948-1963) 12 annas per day
Italy (1929-1934): 1.75 – 4.5 lire per day
Kyrgyzstan (2010): 7 times minimum wage
Malaysia (1955-2012): numerical value Malaysian ringgit per day
Norway (1946-1956): 2 – 6 krone per day
South Africa (1918-1929): 20 shillings per week
Spain (1929): benefit in proportion to contribution period (15 pesetas per quarter of contribution in past 3 years)
Sweden (1919-1931): 2 Swedish krona
Switzerland (1911-1967): 1 – 2 swiss franc per day
Russia (1993-1997): 100% of minimum wage
United Kingdom (1946-1969): 36 shilling or 5 pound sterling per week
Zambia (1965-1995): 65 – 10,00 kwacha

» **Aggregated de jure coverage of maternity program(s) (fam_mat_leave_cov_own)**

This variable provides detailed information about the coverage, preserving the original coding from national legislation texts as much as possible. The basic format of this variable is the “**numeric index. occupation or status**”, e.g. 1.1 resident. We add a numeric index in front of the name of the occupation or employment sector to identify (especially atypical) employment sectors and public/private division. We first categorize legal coverages into three attributes: status, types of employment (atypical or not), and occupation. Next, we categorize more precisely. The keys of the numeric index are as follows:

1. Status

- 1.1 residence (e.g. 1.1 resident, 1.1 universal, 1.1 British subject)
- 1.2 gender, age, marital status, income level (e.g. 1.2 needy, 1.2 single, 1.2 widow)
- 1.3 regional information (e.g. 1.3 citizens in La Paz)
- 1.4 ethnic group (e.g. 1.4 Asian, 1.4 Aborigine)

- 1.5 beneficiary of other types of social programs (e.g. 1.5 pensioner, 1.5 widow of recipient)
 2. Types of employment (especially atypical types of employment) (e.g. 2. self-employed, 2. family workers, 2. household workers, 2. irregular workers)
 3. Occupation⁵ (hierarchical structure)
 - 3.1 highest level: employed, unemployed, students/apprentice, religious occupation
 - 3.2 middle level: private sector, public sector
 - 3.3 lowest level (details of the occupation)
 - 3.4 membership in trade union
-

If a paid maternity leave in a nation-state covers more than one occupation or status, these formats will be connected with either “;” or “,” or “+”. We chain information involving two different levels with “;” if paid maternity leave covers a broad occupational category and explicitly includes specific occupations. For instance, if it is coded as “3.2 private; 3.3 agricultural”, it means this country covers employees in the private sector including the agricultural sector. However, if we chain information involving two different levels of occupational categories with “+”, it means that the paid maternity leave covers only the lower level of occupational categories that belongs to the higher level of occupational categories. For instance, “3.2 public + 3.3 military” indicates that the paid maternity leave covers only military groups in the public sector. “,” connects information in the same level or categories, e.g. “3.3 agricultural, commercial, industrial” or “3.2 public, private”.

In case of multiple parallel maternity leave programs, coverage in the database is aggregated to give an overview of the coverage of paid maternity leave in the nation-state. Below, we present how we coded multiple maternity leave schemes in Chile from 1924 until 1952 as an example.

Between 1924 and 1952, Chile has adopted five major reforms regarding paid maternity leave. Chile introduced its first paid maternity leave as part of a social insurance system in 1924, covering wage earners. Shortly afterwards, it extended its coverage to salaried employees and industrial/commercial workers by adopting different schemes of paid maternity leave, which each had conditions that differed from the first paid maternity leave. For instance, the salaried employees with high qualification were entitled to a higher level of benefit and a longer period of leave. On the other hand, industrial and commercial workers were not included in the social insurance scheme but subject to an employer-liability program. In 1932, Labour code Decree No. 178 intended to guarantee the right of paid maternity leave for all groups, but without unifying the methods of financing, e.g. employer-liability or social insurance. The reform in 1952, i.e. Act No. 10383, which was the follow-up reform of the Act No. 4054, increased the level of benefit and prolonged the duration of benefit for wage earners.

5 In case of occupational variable, the information is often coded as the combination of different levels (i.e. 3.2 public + 3.3 civil servant, 3.2 public + 3.3 military)

Figure 1. Five major reforms in Chile from 1924 until 1952

Act No. 4054 (1924): Wage earner	
Legislative Decree No. 442 (1925): Wage earner, industrial, commercial workers	Decreto No. 857 (1925): Salaried employees
Labour code, Decree No. 178 (1932): Wage earner, industrial, commercial workers, salaried employees	
Act No. 10383 to modify Act No. 4054 (1952): Wage earner	

Original coding:

Chile (1924): paid leave, 50 % of earnings, 4 weeks, 3.3 wage earner, social insurance

Chile (1925): paid leave, 100 % of earnings, 8.6 weeks, 3.3 salaried, social insurance

Chile (1925): paid leave, 50 % of earnings, 8.6 weeks, 3.3 industrial, commercial, wage earners, employer-liability

Chile (1932): paid leave, 50 % of earnings, 12 weeks, 3.3 industrial, commercial, wage earners, salaried, employer-liability

Chile (1952): paid leave, 100 % of earnings, 12 weeks, 3.3 wage earners, social insurance

Aggregated result:

Chile (1924): paid leave, 50 % of earnings, 4 weeks, 3.3 wage earner, social insurance

Chile (1925): paid leave, 50 % of earnings, 8.6 weeks, 3.3 wage earner, salaried, social insurance

Chile (1932): paid leave, 50 % of earnings, 12 weeks, 3.3 industrial, commercial, wage earners, salaried, social insurance

Chile (1952): paid leave, 100 % of earnings, 12 weeks, 3.3 industrial, commercial, wage earner, salaried, social insurance

*standard group in this case is 3.3 wage earners

» Aggregated de jure coverage of maternity program(s) (in categorical variable) (fam_mat_leave_cov_own2)

This variable converts the “fam_mat_leave_cov_own” variable into a **categorical variable** in order to standardize the coding of coverage and enable cross-sectional as well as temporal comparison. Based on the classification of coverage in the ILO Maternity Protection conventions (C003, C103, and C183), we matched all occupations and other types of categorical conditions of entitlement to the four sectors used by the ILO: industrial, non-industrial, agricultural, and atypical. We chain the em-

ployment sectors with “;” and list them in alphabetic order, i.e. agricultural; industrial; non-industrial.

If a legal coverage is coded as “all employed” from the very first maternity protection program, it does not mean that the program actually covers the entire working population. It is often the case that the country did not even recognize the necessity (or social right) of maternity protection for marginal groups (i.e. agricultural workers, atypical employment). In most countries, the term “atypical workers” appears in social insurance legislation only after the 1960s. Therefore, we coded “all employed” in the very early years as “industrial, non-industrial” or “industrial, non-industrial, agricultural”, unless the explicit inclusion of occupational groups is found in the legislation.

1. Industrial sector:

- (a) mines, quarries, and other works for the extraction of minerals from the earth
- (b) industries in which articles are manufactured, altered, cleaned, repaired, ornamented, finished, adapted for sale, broken up or demolished, or in which materials are transformed ; including shipbuilding and the generation, transformation, and transmission of electricity or motive power of any kind;
- (c) construction, reconstruction, maintenance, repair, alteration, or demolition of any building, railway, tramway, harbour, dock, pier, canal, inland waterway, road, tunnel, bridge, viaduct, sewer, drain, well, telegraphic or telephonic installation, electrical undertaking, gas work, water work, or other work of construction, as well as the preparation for or laying the foundation of any such work or structure;
- (d) transport of passengers or goods by road, rail, sea, or inland waterway, including the handling of goods at docks, quays, wharves, and warehouses, but excluding transport by hand.

2. Non-industrial sector:

- (a) commercial establishments;
- (b) postal and telecommunication services;
- (c) establishments and administrative services in which the persons employed are mainly engaged in clerical work;
- (d) newspaper undertakings;
- (e) hotels, boarding houses, restaurants, clubs, cafes and other refreshment houses;
- (f) establishments for the treatment and care of the sick, infirm or destitute and of orphans;
- (g) theatres and places of public entertainment.

3. Agricultural sector:

occupations carried on in agricultural undertakings, including plantations and large-scale industrialized agricultural undertakings.

4. Atypical sector:

fixed term contracts, casual, contract, seasonal and part-time workers, homeworkers, piece workers, temporary agency workers, unorganized, informal employees and women in disguised self-employment.

- » **Population excluded from paid maternity leave (fam_mat_leave_excl_cov_own)**
The basic format of this variable is identical with the “fam_mat_leave_cov_own” variable, i.e. the “numeric index. occupation or status”. It codes the groups that legislation specifically mentions to be excluded from paid maternity schemes. Historically, **employees in atypical sector**, e.g. domestic servants and self-employed, **irregular workers**, e.g. temporary contracted workers (especially in Asian countries) and casual workers, foreigners, employees in small enterprises, and housewives were exempted from public paid maternity leave.
- » **Coverage of voluntary paid maternity leave (fam_mat_leave_vol_cov_own)**
The basic format of this variable is identical with the “fam_mat_leave_cov_own” variable, i.e. the “numeric index. occupation or status”. This indicator shows the coverage of voluntary paid maternity leave if voluntary paid maternity leave programs exist in addition to the public paid maternity leave program. We decided not to aggregate the coverage of voluntary paid maternity leave into “fam_mat_leave_cov_own” and “fam_mat_leave_cov_own2” variables because Global South countries tend to introduce voluntary paid maternity leave to shift the responsibility of social protection to individuals or corporations, and avoid extending the coverage of public paid maternity leave schemes. For instance, the majority of voluntary programs cover **the typical groups excluded from public maternity leave schemes, e.g. domestic workers, foreigners, and employees in the informal sector.**
- » **Coverage of the special system of paid maternity leave (fam_mat_leave_spe_cov_own)**
The basic format of this variable is identical with the “fam_mat_leave_cov_own” variable, i.e. the “numeric index. occupation or status”. The special system often provides higher levels of benefit and longer leave to privileged groups, e.g. civil servants, railroad sectors, or functions similarly to voluntary paid maternity leave for unprivileged groups, e.g. foreigner and domestic workers.
- » **Existence of a means-tested conditionality (fam_mat_leave_means_own)**
This variable codes whether a maternity leave program is means-tested or not as a binary variable.
- » **Qualifying conditions of paid maternity leave (fam_mat_leave_con_own), e.g. number of employees in working places, length to contribution of social insurance, length of employment**
The format of this variable varies along the types of eligibility criteria. The number of employees in working places is coded in a format of “company min. digit workers”, while the length of contribution and employment is coded as “employment/contribution digit unit of time (during last digit unit of time)”, e.g. employment 12 months during last 24 months. If there exists more than one eligibility criterion, we connect them with “+”, e.g. employment 12 months + company min. 20 workers.

» **Financing of maternity leave (fam_mat_leave_finance_own), e.g. provident fund, charity, insurance, employer, employee, state**

This variable is composed of two different types of information. Firstly, it shows to which system paid maternity leave belongs, e.g. provident fund, charity, social insurance, and employer-liability. In all cases except for employer-liability, we code the type of system with the list of financers, e.g. employee, employer, insurance. In cases of employer-liability, the entry is coded as solely “employer”. Some countries provide paid maternity leave from two different systems, i.e. social insurance and employer-liability. If the social insurance does not provide sufficient amount of benefit due to a short length of the contribution period, employers were often required to pay a certain part of the benefit according to labor code. We coded such cases as “insurance” and marked such cases in the “comment” column as “employer liability + social insurance”.

Secondly, this variable includes information of financing sources (or financers). Since most paid maternity leave programs are funded by more than one financing source, we code multiple sources and connect them with “;”. All elements are ordered by alphabetic order, e.g. employee; employer; insurance; state.

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Appendix 1

Standards for the level of benefit and duration

- » The first child is the standard reference group if a paid maternity leave differentiates the condition of benefit between the first child and consecutive children.
- » The only child is the standard reference group if there is an additional clause regarding the amount of benefit for multiple children, e.g. Cameroon 1959-64.
- » If two different programs, i.e. employer-liability and social insurance, pay the maternity leave benefit, we code the aggregated amount of benefit.

Standard group

Albania (1953-61): trade union member vs. non-trade union member; trade union member

Australia (1973-now): employed (not public sector only)

Austria (1928-1948): manual workers vs. salaried employees vs. agricultural; manual workers

Austria (1949): 10 weeks if not working, 12 weeks if working

Azerbaijan (1997-now): agricultural and industrial vs. non-agricultural; agricultural and industrial (based on wiki: Economy of Azerbaijan)

Brazil (1943-1976): labor law 1943 (including maternity leave) vs. social insurance 1960 vs. 1969 (only maternity grant); labor law 1943

Brunei (2011): private vs. public; private

Chile (1925): wage earner vs. salaried; wage earner

China (1988): public vs. private; public

Costa Rica (1952-now): beneficiary of social insurance vs. non-beneficiary of social insurance; beneficiary of social insurance

Czechoslovakia (1926): public vs. private; public

Denmark (1919-1945): factory workers vs. non-factory workers; factory workers

France (1928): needy (means-tested) vs. employed; employed

France (1946): employed (including industrial and commercial) vs. agricultural; employed (including industrial and commercial)

India (1961): employed vs. industrial; employed

Italy (1950): industrial vs. agricultural vs. commercial; industrial

Peru (1958): wage earners vs. salaried employees; wage earners

Philippines (1993): non-caesarian babies vs. caesarian babies; non-caesarian babies

Sweden (1931): sick fund members vs. non-sick fund members; sick fund members

U.S.S.R (1946-1964): Trade union member vs. non-trade union members; trade union members

Vietnam: Workers engaged in hazardous work vs. normal; normal

Appendix 2

Table 2. Manual of extracting information from the HDML indicators using regular expressions

Variable	What to extract	Regular expression using “stringr” in Rstudio
Duration of paid maternity leave (in original unit) (fam_mat_leave_dur_paid_own)	Duration of paid maternity leave before childbirth	<code>str_extract(df\$ fam_mat_leave_dur_paid_own, “\\d{1,}(\\.\\d{1,})?\\s+\\w+\\s+before”) %>% str_remove(“\\s+before”)</code>
	Duration of paid maternity leave after childbirth	<code>str_extract(df\$ fam_mat_leave_dur_paid_own, “\\d{1,}(\\.\\d{1,})?\\s+\\w+\\s+after”) %>% str_remove(“\\s+after”)</code>
Duration of maternity benefit (in original unit) (fam_mat_leave_dur_ben_own)	Duration of maternity benefit before childbirth	<code>str_extract(df\$ fam_mat_leave_dur_ben_own, “\\d{1,}(\\.\\d{1,})?\\s+\\w+\\s+before”) %>% str_remove(“\\s+before”)</code>
	Duration of maternity benefit after childbirth	<code>str_extract(df\$ fam_mat_leave_dur_ben_own, “\\d{1,}(\\.\\d{1,})?\\s+\\w+\\s+after”) %>% str_remove(“\\s+after”)</code>
Aggregated de jure coverage of maternity program(s) (fam_mat_leave_cov_own) Excluded population from paid maternity leave (fam_mat_leave_excl_cov_own) Coverage of voluntary paid maternity leave (fam_mat_leave_vol_cov_own) Coverage of special system of paid maternity leave (fam_mat_leave_spe_cov_own)	Do paid maternity schemes in each nation state cover/ exclude employee in atypical sector? If yes, which occupations in atypical sector are covered?	<code>str_extract(df\$var, “2\\.\\.\\s+\\w+(\\.+?(\\w{1,}\$ \\s+\\d+))?”) %>% str_remove_all(“\\.\\.\\s+\\d+”)</code>
	Do paid maternity schemes in each nation state cover/ exclude employee in public sector?	<code>str_extract(df\$var, “3\\.\\.2\\s+public”)</code>
Qualifying conditions of paid maternity leave (fam_mat_leave_con_own)	What is the minimum number of employees in working places to be obliged to provide paid maternity leave?	<code>str_extract(df\$ fam_mat_leave_con_own, “company\\s+min\\.\\.\\s+\\d{1,}\\s+workers”)</code>
	What is the qualifying period of employment to be entitled to paid maternity leave?	<code>str_extract(df\$ fam_mat_leave_con_own, “employment(\\s+\\+\\s+insurance)?\\s+\\d{1,}\\s+\\w+”)</code>
	What is the qualifying period of contribution to be entitled to paid maternity leave?	<code>str_extract(df\$ fam_mat_leave_con_own, “contribution(\\s+\\+\\s+employment)?\\s+\\d{1,}(\\s+\\+\\s+\\d{1,})?\\s+\\w+”)</code>
Financing of maternity leave (fam_mat_leave_finance_own)	Is paid maternity leave part of social insurance?	<code>str_extract(df\$fam_mat_leave_finance_own, “insurance”)</code>
	Is paid maternity leave employer-liability?	<code>str_extract(df\$fam_mat_leave_finance_own, “^ employer\$”)</code>