



LE GOUVERNEMENT
DU GRAND-DUCHÉ DE LUXEMBOURG
Ministère de la Sécurité sociale

Inspection générale de la sécurité sociale

Luxembourg
Microdata
Platform
on Labour
and Social
Protection

Luxembourg Microdata Platform on Labour and Social Protection

Data Dictionary

Inspection générale de la sécurité sociale

Last update: 06/11/2019

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The aim of the Luxembourg Microdata Platform on Labour and Social Protection is to provide useful data for research on the labour market and social protection in Luxembourg. Our main objective is to ensure the quality of the data and to answer access demands as quickly as possible.

This double requirement implies:

- firstly, to carry out exploratory analyzes to test the quality and the consistency of data,*
- secondly, to automate data extractions.*

Currently, analyzes mentionned in the first point are completed. But, automated extractions are only operational for some of data available in the dictionary. As a result, the General Social Security Inspectorate (IGSS) foresees a transition period during which processing durations to provide data may vary, depending on the level of completion of the automation process for requested variables.

Any suggestions to improve this document are welcome.



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1 Introduction

In the context of their respective missions, the Ministry of Social Security (MSS) and the Ministry of Labour, Employment and Social and Solidarity Economy (MTEESS) have joined forces to create a microdata access platform, called *the Luxembourg Microdata Platform on Labour and Social Protection*.

This platform has two objectives:

- to facilitate access to pseudonymised administrative personal data, in order to enhance the statistical use of administrative data and thus to develop research on labour market and social protection;
- at the same time, to ensure protection of individual data, in the respect of the European General Data Protection Regulation (GDPR), applied since the 25th of May 2018.

The *Luxembourg Microdata Platform on Labour and Social Protection* has been created for experts in the field of labour market and social protection and for projects with an exclusively statistical purpose.

Concerning protection of individual data, the platform is based on two pillars:

- A secure remote access. Data can only be accessed using a secure remote access system with strong LUXTRUST authentication. This system allows permanent control of access and prevents the uncontrolled dissemination of administrative data. This system has been put in place through collaboration with the State Information Technology Center (CTIE), which provides the technical infrastructure.
- A set of procedures to strengthen the protection of individual data (application of the "need to know" rule, confidentiality agreements, output checking...)



2 Data User's Guide

2.1 Sources of data

Microdata available in the Platform are administrative data that have been transformed and prepared for statistical purposes. They come from different national institutions:

- the centre commun de la sécurité sociale (CCSS),
- the agence pour le développement de l'emploi (ADEM)
- the service national de la statistique (STATEC)
- the caisse nationale de santé (CNS)
- the caisse nationale d'assurance pension (CNAP)
- the fonds national de solidarité (FNS)
- the caisse pour l'avenir des enfants (CAE)
- pension public schemes.

2.2 Field covered by administrative data

The administrative data provided are directly related to the social protection system. As a result, they concern only individuals who are linked to the national social protection system. As a consequence, international civil servants who are not affiliated to Luxembourg social security are excluded from the scope of the platform.

2.3. How is data organized and delivered?

Microdata are organized in thematic registers: a "socio-demographic characteristics" register, a "job characteristics" register, etc. Provided variables are defined according to the "need to know" rule.

If necessary, all the registers can be joined using different key variables:

- reference_period (the information is provided monthly, except for absences from work)
- individual_IDnumber (pseudonymised individual identification number),
- employer_IDnumber (pseudonymised employer identification number)
- job_IDnumber (job identification number).

Registers are provided separately. Indeed, it is up to the applicant to join registers.



All variables are prefixed:

- for variables which concern individuals, the prefix is i_
- for variables which concern jobs, the prefix is j_
- for variables which concern employers, the prefix is e_
- for variables which concern work absences, the prefix is a_

Specific values of variables



not applicable	not available	not provided
-9	-8	-1

By default, all variables are available since January 2002. If not, the period covered is indicated.

By default, there are no series breaks. Otherwise, moments and reasons of series breaks are provided.

By default and to limit the risk of re-identification, only months and years are provided for date variables (the day is always recoded in 01). If the project requires more precise dates, it is up to the applicant to justify in order to comply with the "need to know" rule.

By default, incomes are provided in classes, except when they are defined according to scales (such as family allowances). The size of classes is defined with the applicant according to the "need to know" rule. All provided incomes refer to gross amounts.

Signs  and  indicate that measures of protection for personal data have been taken. Two levels of protection have been introduced.



These variables are provided at an aggregate level. If the project requires a more detailed level of information, it will be up to the applicant to justify it in order to comply with the "need to know" rule.



These variables are not provided by default. If the project requires this variable, it will be up to the applicant to justify it in order to comply with the "need to know" rule. Where appropriate, the level of aggregation provided to the applicant will also be decided according to the "need to know" rule.



2.4. Documentation concerning employment and social protection in Luxembourg

For aggregated statistics, IGSS publishes:

- statistics related to social protection on the site <http://www.statsecu.public.lu>
- statistics related to employment on the site <http://www.adem.public.lu/fr/marche-emploi-luxembourg/faits-et-chiffres/statistiques/igss>

For information on social protection, see "Social Security Law"

http://www.mss.public.lu/publications/droit_securite_sociale/index.html

3 Content of administrative data registers

- 3.1. Sociodemographic characteristics
- 3.2. Characteristics of individuals registered at Luxembourg social security
- 3.3. Characteristics of jobs
- 3.4. Characteristics of employers
- 3.5. Social benefits
 - 3.5.1. Family benefits
 - 3.5.2. Replacement benefits
 - 3.5.3. Social care
- 3.6. Work absences
- 3.7. Family relationships



3.1 Individual sociodemographic characteristics

All individual sociodemographic variables are related to a reference period (year and month).

Some variables can change from month to month (like the age or the residence). Others are always the same (like the country of birth).

Rules for data protection are as follows:



These variables are provided at an aggregate level. If the project requires a more detailed level of information, it will be up to the applicant to justify it in order to comply with the "need to know" rule.




These variables are not provided by default. If the project requires this variable, it will be up to the applicant to justify it in order to comply with the "need to know" rule. Where appropriate, the level of aggregation provided to the applicant will also be decided according to the "need to know" rule.


Name of the variable	reference_period
Description	Year and month
Format	Character (yyyymm)
Values	
Comments	
Source(s)	

Name of the variable	individual_IDnumber
Description	Pseudonymised individual identification number
Format	Character
Values	
Comments	
Source(s)	


Name of the variable	i_gender
Description	
Format	Character
Values	0 Male 1 Female
Comments	
Source(s)	CCSS



Name of the variable	i_age
Description	Age at the end of the month
Format	Character
Values	0 less than 20 years 1 20-24 years 2 25-29 years 3 30-34 years  4 35-39 years 5 40-44 years 6 45-49 years 7 50-54 years 8 55-59 years 9 60 years and more
Comments	
Source(s)	CCSS

Name of the variable	i_civil_status
Description	
Format	Character
Values	0 Single  1 Married or civil partnership 2 Separated-divorced Widow(er)
Comments	This variable is not reliable for people living outside Luxembourg. For them, the value is -8 (not available).
Source(s)	CCSS

Name of the variable	i_residence_country
Description	
Format	Character
Values	0 Luxembourg 1 Germany 2 Belgium 3 France 4 Other
Comments	Residence country refers to the administrative address. When the country of residence is outside the Greater Region, one would assume the person lives in Luxembourg, at least during the week.
Source(s)	CCSS

Name of the variable	i_location_residence
Description	
Format	Character
Values	 This variable refers to the following levels: "canton" for Luxembourg, "département" for France, "province" for Belgium and "Regierungsbezirk" for Germany. For other countries, the variable is not available.
Comments	More detailed variables are available about residence. They will be provided according to the "need to know" rule.
Source(s)	CCSS



Name of the variable	i_citizenship	
Description		
Format	Character	
Values	0	Luxembourg
	1	Germany
	2	Belgium
	3	France
	4	Portugal
	5	Other EU-28
	6	Other
Comments	This variable refers to the main citizenship during the reference period. It can change from month to month for people who acquire another citizenship. In case of dual citizenship, the provided citizenship is the one considered as the first by the administration.	
Source(s)	CCSS	

Name of the variable	i_birth_country	
Description		
Format	Character	
Values	0	Luxembourg
	1	Germany
	2	Belgium
	3	France
	4	Portugal
	5	Other EU-28
	6	Other
Comments		
Source(s)	CCSS	

Name of the variable	i_NIN_creation_date	
Description		
Format	Date yyyy-mm	
Values		
Comments	The variable refers to the date of creation of the national identification number. For people registered before the 1 st january 1977, the date is always january 1977.	
Source(s)	CCSS	

Name of the variable	i_death_date	
Description		
Format	Date yyyy-mm	
Values		
Comments		
Source(s)	CCSS	



3.2 Characteristics of individuals registered in the Luxembourgish social security

All variables concerning people registered in the Luxembourgish social security are related to a reference period (year and month).

Some variables can change from month to month (like the length of the career in Luxembourg). Others do not change over time (like the date of the first job in Luxembourg).

Name of the variable	reference_period
Description	Year and month
Format	Character (yyyymm)
Values	
Comments	
Source(s)	

Name of the variable	individual_IDnumber
Description	Pseudonymised individual identification number
Format	Character
Values	
Comments	
Source(s)	

Name of the variable	i_coinsurance
Description	
Format	Character
Values	0 Personal insurance 1 Co-insured
Comments	"Not applicable" concerns people not registered in the Luxembourgish social security system
Source(s)	CCSS

Name of the variable	i_length_career_Luxembourg
Description	
Format	Numeric
Values	Number of years
Comments	
Source(s)	CCSS

Name of the variable	i_first_job_Luxembourg_date
Description	
Format	Date yyyymm
Values	
Comments	"Not applicable" concerns people who have never worked. Student internships and summer jobs are not considered as a first job.
Source(s)	CCSS



3.3 Characteristics of jobs

All variables concerning jobs are related to a reference period (year and month). Some variables can change from month to month (like the number of worked hours or the wage). Others do not change over time (like the starting date of the job).


Name of the variable	reference_period
Description	Year and month
Format	Character (yyyymm)
Values	
Comments	
Source(s)	

Name of the variable	job_IDnumber
Description	Identification number of the job
Format	Character
Values	
Comments	
Source(s)	CCSS

Name of the variable	individual_IDnumber
Description	Pseudonymised individual identification number
Format	Character
Values	
Comments	
Source(s)	

Name of the variable	employer_IDnumber
Description	Pseudonymised employer identification number
Format	Character
Values	
Comments	If the employer is self-employed or a private person, the value is "Not applicable".
Source(s)	CCSS

Name of the variable	temporary_jobs_employer_IDnumber
Description	Pseudonymised employer identification number for temporary jobs
Format	Character
Values	
Comments	"Not applicable" concerns non temporary jobs.
Source(s)	CCSS

Name of the variable	j_job_start_date
Description	
Format	Date yyyymm
Values	
Comments	
Source(s)	CCSS



Name of the variable	j_job_end_effective_date
Description	Date the job ends
Format	Date yyyy-mm
Values	
Comments	Not applicable concerns current jobs.
Source(s)	CCSS

Name of the variable	j_contract_type
Description	
Format	Character
Values	0 Permanent contract 1 Fixed-term contract 2 Temporary contract 3 Apprenticeship contract 4 Summer or student job
Comments	Not applicable concerns self-employed. Information is unavailable before 2005.
Source(s)	CCSS

Name of the variable	j_job_end_planned_date
Description	
Format	Date yyyy-mm
Values	
Comments	Not applicable concerns permanent contracts and self-employed. This variable refers to the date when the contract is expected to end (as decided at the moment of recruitment).
Source(s)	CCSS

Name of the variable	j_contract_planned_duration
Description	Duration of the contract as planned when hiring
Format	character
Values	0 < 2 weeks 1 [2 weeks - 1 month[2 [1 - 2 months[3 [2 - 6 months[4 [6 - 12 months[5 [12 - 24 months[6 ≥ 24 mois
Comments	Not applicable concerns permanent contracts and self-employed. This variable refers to the duration fixed at the moment of recruitment. $j_contract_planned_duration = j_end_planned_date - j_start_date$
Source(s)	CCSS



Name of the variable	j_job_status
Description	
Format	Character
Values	0 Private sector worker 1 Civil servant 2 Self-employed
Comments	
Source(s)	CCSS





Name of the variable	j_blue-collar
Description	Whether the worker performs manual tasks
Format	Character
Values	0 No 1 Yes
Comments	This variable is not reliable for self-employed and civil servants. For them, the value is -8.
Source(s)	CCSS

Name of the variable	j_posted_worker
Description	Posted worker abroad
Format	Character
Values	0 No 1 Yes
Comments	"Not applicable" concerns self-employed.
Source(s)	CCSS

Name of the variable	j_assisting_family_member
Description	
Format	Character
Values	0 No 1 Yes
Comments	Person living with the owner of the unit and working regularly for the unit, but do not have a contract of service and do not receive a fixed sum for the work they perform. This is limited to those persons who are not included on the payroll of another unit as their principal occupation. For assisting family members, relevant variables are j_job_start_date, j_job_end_planned_date and employer_IDnumber.
Source(s)	CCSS

Name of the variable	j_activation_measure
Description	Whether the worker is registered in an active labour market policy at the public employment service (ADEM)
Format	Character
Values	0 No 1 Yes
 	
Comments	"Not applicable" concerns self-employed. Only activation measures assimilated to jobs are registered in the file.
Source(s)	CCSS

Name of the variable	j_activation_measure_type
Description	Name of the activation measure
Format	Character
Values	Changing values according to new measures
 	
Comments	"Not applicable" concerns self-employed and workers out of activation schemes. http://www.adem.public.lu/fr/demandeurs-demploi/aides-financieres-mesures/mesures-emploi/index.html
Source(s)	ADEM



Name of the variable	j_internal_redeployment
Description	Whether the worker is concerned by an internal redeployment (<i>reclassement interne</i>), due to a loss of working capacity
Format	Character
Values	0 No 1 Yes
Comments	"Not applicable" concerns self-employed.
Source(s)	CCSS

Name of the variable	j_trial_period
Description	Whether the contract has a trial period
Format	Character
Values	0 No 1 Yes
Comments	"Not applicable" concerns self-employed. The variable is available from 2008 onwards. Before 2008, the value is -8.
Source(s)	CCSS

Name of the variable	j_trial_period_end_date
Description	
Format	Date yyyyymm
Values	
Comments	"Not applicable" concerns self-employed and workers without trial period. The variable is available from 2008 on. Before 2008, the value is -8.
Source(s)	CCSS

Name of the variable	j_trial_period_length
Description	
Format	Numeric
Values	Number of weeks (rounded to the nearest integer)
Comments	"Not applicable" concerns self-employed and workers without trial period. The variable is available from 2008 on. Before 2008, the value is -8. $j_trial_period_length = j_trial_period_end_date - j_job_start_date$
Source(s)	CCSS

Name of the variable	j_F_month_base_wage
Description	Whether receiving a base wage during the month
Format	Character
Values	-9 Not applicable -8 Missing data 1 Yes
Comments	"Not applicable" concerns self-employed. This variable is missing before January 2009. Before this date, corresponding to the introduction of the single status (<i>statut unique</i>), the different components of the wage were not distinguishable.
Source(s)	CCSS



Name of the variable	j_month_base_wage
Description	Monthly gross base wage
Format	Character
Values	Wage classes to be defined according to the "need to know" rule
Comments	"Not applicable" concerns self-employed. This variable is missing before January 2009. Before this date, corresponding to the introduction of the single status (<i>statut unique</i>), the different components of the wage were not distinguishable.
Source(s)	CCSS

Name of the variable	j_F_month_additionnal_wage
Description	Whether receiving a additionnal wage during the month
Format	Character
Values	-9 Not applicable -8 Missing data 1 Yes
Comments	"Not applicable" concerns self-employed. This variable is missing before January 2009. Before this date, corresponding to the introduction of the single status (<i>statut unique</i>), the different components of the wage were not distinguishable.
Source(s)	CCSS

Name of the variable	j_month_additionnal_wage
Description	Monthly gross additionnal wage, excluding overtime wage
Format	Character
Values	Wage classes to be defined according to the "need to know" rule
Comments	
Source(s)	CCSS

Name of the variable	j_F_month_overtime_wage
Description	Whether receiving an overtime wage during the month
Format	Character
Values	-9 Not applicable -8 Missing data 1 Yes
Comments	"Not applicable" concerns self-employed. This variable is missing before January 2009. Before this date, corresponding to the introduction of the single status (<i>statut unique</i>), the different components of the wage were not distinguishable.
Source(s)	CCSS

Name of the variable	j_month_overtime_wage
Description	Monthly gross overtime wage
Format	Character
Values	Wage classes to be defined according to the "need to know" rule
Comments	
Source(s)	CCSS

Name of the variable	j_F_month_total_wage
Description	Whether receiving a wage during the month
Format	Character
Values	-9 Not applicable -8 Missing data 1 Yes
Comments	"Not applicable" concerns self-employed. This variable is missing before January 2009.
Source(s)	CCSS



Name of the variable	j_month_total_wage
Description	Monthly gross total wage
Format	Character
Values	Wage classes to be defined according to the "need to know" rule
Comments	$j_month_total_wage = j_month_base_wage + j_month_additionnal_wage + j_month_overtime_wage$
Source(s)	CCSS

Name of the variable	j_nb_base_worked_hours
Description	
Format	Character
Values	Classes to be defined according to the "need to know" rule
Comments	<p>The number of worked base hours is related to the number of working days in the month. Thus, depending on the month and the number of days off, the number of worked hours can vary from 144 hours to 184 hours.</p> <p>This variable is missing before January 2009. Before this date, corresponding to the introduction of the single status (<i>statut unique</i>), only the total number of worked hours was declared (base hours + overtime).</p> <p>"Not applicable" concerns self-employed.</p>
Source(s)	CCSS

Name of the variable	j_nb_overtime_paid_hours
Description	
Format	Character
Values	Classes to be defined according to the "need to know" rule.
Comments	<p>This variable is missing before January 2009. Before this date, corresponding to the introduction of the single status, only the total number of worked hours was declared (contractual hours + overtime).</p> <p>"Not applicable" concerns self-employed.</p>
Source(s)	CCSS

Name of the variable	j_nb_total_worked_hours
Description	
Format	Character
Values	Classes to be defined according to the "need to know" rule.
Comments	$j_nb_total_worked_hours = j_nb_base_worked_hours + j_nb_overtime_paid_hours$ <p>As the number of contractual worked hours, the number of total worked hours is related to the number of working days in the month. This variable exists before January 2009.</p> <p>"Not applicable" concerns self-employed.</p>
Source(s)	CCSS



The three variables above refer to the effective time spent working (worked hours). Since the number of worked hours is dependent on the number of working days in the month, it is IMPOSSIBLE to calculate a correct hourly wage using these variables. Indeed, the hourly wage of a worker receiving the same monthly wage would change, leading one to consider significant fluctuations in wages while they are purely artificial. This is why we have calculated below an hourly wage ADJUSTED for calendar effects (See annex 1 for the applied methodology).

Name of the variable	j_nb_base_worked_hours_ADJ
Description	Adjusted number of worked base hours
Format	Character
Values	Classes to be defined according to the "need to know" rule
Comments	See annex 1 for details about the way to compute adjusted numbers of base worked hours This variable is missing before January 2009. Before this date, corresponding to the introduction of the single status (<i>statut unique</i>), only the total number of worked hours was declared (base hours + overtime). "Not applicable" concerns self-employed.
Source(s)	CCSS

Name of the variable	j_nb_total_worked_hours_ADJ
Description	Adjusted number of total worked hours
Format	Character
Values	Classes to be defined according to the "need to know" rule.
Comments	See annex 1 for details about the way to compute adjusted numbers of total worked hours $j_nb_total_worked_hours_ADJ = j_nb_base_worked_hours_ADJ + j_nb_overtime_paid_hours$ This variable exists before January 2009. "Not applicable" concerns self-employed.
Source(s)	CCSS

Name of the variable	j_hourly_base_wage
Description	
Format	Character
Values	Classes to be defined according to the "need to know" rule
Comments	$j_hourly_base_wage = j_month_base_wage / j_nb_base_worked_hours_ADJUSTED$ This variable is missing before January 2009. Before this date, corresponding to the introduction of the single status (<i>statut unique</i>), only the total number of worked hours was declared (base hours + overtime). "Not applicable" concerns self-employed. For jobs with a duration of 12 months or less, the monthly hourly wage adjusted for the calendar effect is not provided. For these jobs, the researcher can compute by himself an average hourly wage over the entire occupation.
Source(s)	CCSS

Name of the variable	j_hourly_total_wage
Description	
Format	Character
Values	Classes to be defined according to the "need to know" rule
Comments	$j_hourly_total_wage = \sum (j_month_base_wage + j_month_additionnal_wage + j_month_overtime_wage) / j_nb_total_worked_hours_ADJUSTED$ "Not applicable" concerns self-employed. For jobs with a duration of 12 months or less, the monthly hourly wage adjusted for the calendar effect is not provided. For these jobs, the researcher can compute by himself an average hourly wage over the entire occupation.
Source(s)	CCSS



Name of the variable	j_F_official_stat
Description	Whether the job is included in monthly official employment statistics
Format	Character
Values	0 No 1 Yes
Comments	<p>This flag has to be used to select jobs retained for calculation of monthly official employment statistics published by IGSS.</p> <p>These monthly statistics refer to the number of persons working the last working day of the month. Consequently, official statistics exclude jobs that end before the last working day and secondary jobs. That means that in case of multiple jobs, we keep only one job per worker (the main one).</p>
Source(s)	CCSS




3.4 Characteristics of employers

All variables concerning employers are related to a reference period (year and month). All of them can change from month to month.

Name of the variable	reference_period
Description	Year and month
Format	Character (yyyymm)
Values	
Comments	
Source(s)	

Name of the variable	employer_IDnumber
Description	Pseudonymised employer identification number
Format	Character
Values	
Comments	Employers can change their registration number from one period to another just because they change their status.
Source(s)	CCSS

Name of the variable	e_activity_sector
Description	Activity sector according to the NACE Rev.2 classification
Format	Character
Values	 Nace 2 digits See http://www.statistiques.public.lu/catalogue-publications/nace/PDF-NACE-2.pdf
Comments	
Source(s)	CCSS/STATEC

Name of the variable	e_legal_status
Description	
Format	Character
Values	0 Private 1 Public 2 Other
Comments	The value "other" includes associations, NGOs, etc.
Source(s)	CCSS

Name of the variable	e_size_employer
Description	Number of workers working for the employer
Format	Character
Values	Classes to be defined according to the "need to know" rule
Comments	The number of workers is calculated at the end of the month. Temporary workers are excluded. People in parental leave full time are excluded as well. By using the "jobs characteristics" register, it is possible to compute many indicators about the composition of the workforce of the employer. To that end, select the existing jobs at the end of the month (variable j_flag_jobs_official_stat = 'yes') and aggregate by employer and by the variables you want to split the workforce by.
Source(s)	CCSS



3.5 Social benefits

All variables concerning social benefits are related to a reference period (year and month).

Name of the variable	reference_period
Description	Year and month
Format	Character (yyyymm)
Values	
Comments	
Source(s)	

Name of the variable	Individual_IDnumber
Description	Pseudonymised individual identification number
Format	Character
Values	
Comments	
Source(s)	

3.5.1 Family benefits

Name of the variable	i_F_family_allowance_right
Description	Whether the individual has children entitled for family allowances (<i>allocations familiales</i>)
Format	Character
Values	0 No 1 Yes
Comments	Family allowances are a right of the child and not of the parent. Therefore, the variable is 'yes' for both parents if appropriate. For a part of the crossborder workers, the information is not available at the individual level. Consequently, this variable is not provided for the crossborder workers. Since October 2010, family allowances eligibility conditions have changed after the introduction of the law concerning the State scholarships and loans to students grant system.
Source(s)	CAE

Name of the variable	i_family_allowance
Description	Monthly amount of the family allowances (<i>allocations familiales</i>) the children of the person are entitled for
Format	Numeric
Values	
Comments	Family allowances are a right of the child and not of the parent. So, it is not an individualised income which is impossible to calculate according to the ignorance of the income sharing rules between parents (the latest may be living in couple or be separated). Therefore, considering the whole amount for estimating the financial situation of the individual results of an overestimation of the latest. For a part of the crossborder workers, the information is not available at the individual level. Consequently and to keep coherence of data, this variable is not provided for the crossborder workers. Since October 2010, family allowances eligibility conditions have changed after the introduction of the law concerning the State scholarships and loans to students grant system.
Source(s)	CAE



Name of the variable	i_F_school_allowance_right
Description	Whether the individual has children entitled to the new school year allowance (<i>allocation de rentrée scolaire</i>)
Format	Character
Values	0 No 1 Yes
Comments	<p>The new school year allowance is a right of the child and not of the parent. Therefore, the variable is 'yes' for both parents if appropriate.</p> <p>For a part of the crossborder workers, the information is not available at the individual level. Consequently and to keep coherence of data, this variable is not provided for the crossborder workers.</p> <p>Since October 2010, the new school year allowance eligibility conditions have changed substantially after the introduction of the law concerning the State scholarships and loans to students grant system.</p> <p>Data on the new school year allowance are not available before 2003.</p>
Source(s)	CAE

Name of the variable	i_school_allowance
Description	Monthly amount of the new school year allowance (<i>allocation de rentrée scolaire</i>)
Format	Numeric
Values	
Comments	<p>The new school year allowance is a right of the child and not of the parent. So, it is not an individualised income which is impossible to calculate according to the ignorance of the income sharing rules between parents (the latest may be living in couple or be separated)..</p> <p>For a part of the crossborder workers, the information is not available at the individual level. Consequently and to keep coherence of data, this variable is not provided for the crossborder workers. Therefore, considering the whole amount for estimating the financial situation of the individual results of an overestimation of the latest.</p> <p>Since October 2010, the new school year allowance eligibility conditions have changed substantially after the introduction of the law concerning the State scholarships and loans to students grant system.</p> <p>Data on the new school year allowance are not available before 2003.</p>
Source(s)	CAE

Name of the variable	i_F_birth_allowance
Description	Whether receiving the birth allowance (<i>allocation de naissance</i>)
Format	Character
Values	0 No 1 Yes
Comments	<p>The birth allowance which is paid in three instalments (prenatal, natal, postnatal) during a three years period is made conditional to different medical examinations the mother and the child must have undergone at different moment of the pregnancy or during the early years of the child's life. For recent beneficiaries, all instalments may not have been paid.</p> <p>The absence of the birth allowance for an eligible mother that should benefit it could therefore indicate a certain type of behaviour. That is why, by default, the variable is not provided.</p>
Source(s)	CAE



Name of the variable	i_type_birth_allowance
Description	Rank of the instalment
Format	Character
Values	0 prenatal 1 natal 2 postnatal
Comments	The birth allowance is paid in three instalments (prenatal, natal, postnatal) during a three years period. Eligibility is made conditional to different medical examinations for mothers and children. For recent beneficiaries, all instalments may not have been paid. The absence of the birth allowance for an eligible mother could therefore indicate a certain type of behaviour. That is why, by default, the variable is not provided.
Source(s)	CAE

Name of the variable	i_birth_allowance
Description	Monthly amount of the birth allowance (<i>allocation de naissance</i>)
Format	Numeric
Values	
Comments	The birth allowance is paid in three instalments (prenatal, natal, postnatal) during a three years period. Eligibility is made conditional to different medical examinations for mothers and children. For recent beneficiaries, all instalments may not have been paid. The absence of the birth allowance for an eligible mother could therefore indicate a certain type of behaviour. That is why, by default, the variable is not provided.
Source(s)	CAE

Name of the variable	i_F_maternity_allowance
Description	Whether receiving the maternity allowance (<i>allocation de maternité</i>)
Format	Character
Values	0 No 1 Yes
Comments	This allowance has been abolished since the 1st June 2015.
Source(s)	CAE

Name of the variable	i_maternity_allowance
Description	Monthly amount of the maternity allowance (<i>allocation de maternité</i>)
Format	Numeric
Values	
Comments	This allowance has been abolished since the 1st June 2015.
Source(s)	CAE

Name of the variable	i_F_childrear_allowance
Description	Whether receiving child rearing allowance (<i>allocation d'éducation</i>)
Format	Character
Values	0 No 1 Yes
Comments	This allowance has been abolished since the 1st June 2015 but persons receiving this allowance the 31 May 2015 continue to benefit from this allowance until the end of the entitlement of the allowance. For a part of the crossborder workers, the information is not available at the individual level. Consequently and to keep coherence of data, this variable is not provided for none of the crossborder workers.
Source(s)	CAE



Name of the variable	i_childrear_allowance
Description	Monthly amount of the child rearing allowance (<i>allocation d'éducation</i>)
Format	Character
Values	Income classes to be defined according to the "need to know" rule
Comments	<p>This allowance is abolished since the 1st June 2015 but persons receiving this allowance the 31 May 2015 continue to benefit from this allowance until the end of the entitlement of the allowance.</p> <p>For a part of the crossborder workers, the information is not available at the individual level. Consequently and to keep coherence of data, this variable is not provided for none of the crossborder workers.</p>
Source(s)	CAE

Name of the variable	i_F_child_bonus_right
Description	Whether the individual has children entitled to the child bonus (<i>boni pour enfant</i>)
Format	Character
Values	0 No 1 Yes
Comments	<p>The child bonus is a tax reduction (introduced in 2008) but can be compared to a family benefit. It is linked to the child and not to the parent. Therefore, the variable is 'yes' for both parents if appropriate.</p> <p>For a part of the crossborder workers, the information is not available at the individual level. Consequently, the variable is not provided for crossborder workers.</p> <p>Since October 2010, child bonus eligibility conditions have changed substantially after the introduction of the law concerning the State scholarships and loans to students grant system. Since August 2016, the child bonus is merged with the family allowances (<i>allocations familiales</i>).</p>
Source(s)	CAE

Name of the variable	i_child_bonus
Description	Monthly amount of the child bonus (<i>boni pour enfant</i>)
Format	Numeric
Values	
Comments	<p>The child bonus is a tax reduction (introduced in 2008) but can be compared to a family benefit. It is linked to the child and not to the parent. So, it is not an individualised income which is impossible to calculate according to the ignorance of the income sharing rules between parents (the latest may be living in couple or be separated). Therefore, considering the whole amount for estimating the financial situation of the individual results of an overestimation of the latest.</p> <p>For a part of the crossborder workers, the information is not available at the individual level. Consequently, this variable is not provided for none of the crossborder workers.</p> <p>Since October 2010, child bonus eligibility conditions have changed substantially after the introduction of the law concerning the State scholarships and loans to students grant system. Since August 2016, the child bonus is merged with the family allowances (<i>allocations familiales</i>).</p>



3.5.2 Replacement benefits

Name of the variable	i_F_parental_leave
Description	Whether the individual is on parental leave (<i>congé parental</i>)
Format	Character
Values	0 No 1 Yes
Comments	
Source(s)	CCSS

Name of the variable	i_parental_leave_start_date
Description	
Format	Date yyyy-mm
Values	
Comments	
Source(s)	CCSS

Name of the variable	i_parental_leave_end_date
Description	
Format	Date yyyy-mm
Values	
Comments	
Source(s)	CCSS

Name of the variable	i_parental_leave_type
Description	
Format	Character
Values	0 Full time 1 Part time 2 Split parental leave (4 months over 20 months max) 3 Split parental leave (1 day/week during 20 months)
Comments	Workers on full time parental leave or on split leave (4 months over 20 months max) are not considered as employees. Therefore they are not present in the employment register during the parental leave. In contrast, workers on part-time parental leave or on split parental leave (1 day/week during 20 months) are in work simultaneously to the parental leave. The parental leave was reformed the 1st December 2016. This reform introduced the split parental leave.
Source(s)	CCSS

Name of the variable	i_parental_leave_rank
Description	
Format	Character
Values	PL1 PL2
Comments	The parent can request: - either the "first parental leave" (PL1), which must be taken immediately after the maternity or adoption leave; - or the "second parental leave", which must be taken before the child's 6th birthday (the 12th birthday for adopted children).
Source(s)	CAE



Name of the variable	i_parental_leave_childIDnumber
Description	Individual IDnumber of the child reared during the parental leave
Format	Character
Values	
Comments	Prior to parental leave reform of the 1 st December 2016, the ID of the child reared during the parental leave was unknown. For these reason the value is -8.
Source(s)	CCSS

Name of the variable	i_parental_leave_benefit
Description	Gross monthly amount of the parental leave benefit (<i>congé parental</i>)
Format	Character
Values	Income classes to be defined according to the "need to know" rule
Comments	
Source(s)	CCSS

Name of the variable	i_F_unemployment_benefit
Description	Whether receiving unemployment benefits (<i>indemnité de chômage</i>)
Format	Character
Values	0 No 1 Yes
Comments	Included individuals receiving unemployment benefits because of an external redeployment (<i>reclassement externe</i>)
Source(s)	CCSS

Name of the variable	i_F_external_redeployment
Description	Whether receiving unemployment benefits because of an external redeployment (<i>reclassement externe</i>)
Format	Character
Values	0 No 1 Yes
Comments	
Source(s)	CCSS

Name of the variable	i_unemployment_benefit
Description	Gross monthly amount of unemployment benefit (<i>indemnité de chômage</i>)
Format	Character
Values	Income classes to be defined according to the "need to know" rule
Comments	
Source(s)	CCSS

Name of the variable	i_F_compensation_benefits (currently unavailable)
Description	Whether receiving compensation benefits (<i>aide au réemploi ou indemnité compensatoire</i>)
Format	Character
Values	0 No 1 Yes
Comments	This variable refers to benefits intended to compensate for the loss of wages suffered by an unemployed person who accepts a lower-paid job than the previous one. There are two types of allowances: the "indemnité compensatoire" in case of internal redeployment and the "aide au réemploi" for others.
Source(s)	CCSS



Name of the variable	i_type_compensation_benefits (currently unavailable)
Description	Type of compensation benefits
Format	Character
Values	0 Aide au réemploi 1 Indemnité compensatoire
Comments	This variable refers to benefits intended to compensate for the loss of wages suffered by an unemployed person who accepts a lower-paid job than the previous one.
Source(s)	CCSS

Name of the variable	i_compensation_benefits (currently unavailable)
Description	Gross monthly amount of compensation benefits (<i>aide au réemploi ou indemnité compensatoire</i>)
Format	Character
Values	Income classes to be defined according to the "need to know" rule
Comments	In case of internal or external redeployment, the employee is entitled to a compensation benefit if the redeployment will reduce his wage.
Source(s)	CCSS

Name of the variable	i_F_tideover_benefit
Description	Whether receiving tideover benefit (<i>indemnité d'attente or indemnité professionnelle d'attente</i>)
Format	Character
Values	0 No 1 Yes
Comments	Workers in external redeployment receive this benefit when the unemployment benefit ends. The calculation of this benefit changed with the 2015 law on the professional redeployment. Before the law, this benefit was called "indemnité d'attente". After the law, it is called <i>indemnité professionnelle d'attente</i> .
Source(s)	ADEM/CNAP

Name of the variable	i_type_tideover_benefit
Description	Type of tideover benefit
Format	Character
Values	0 Indemnité d'attente 1 Indemnité professionnelle d'attente
Comments	Workers in external redeployment receive this benefit when the unemployment benefit ends.
Source(s)	ADEM/CNAP

Name of the variable	i_tideover_benefit
Description	Gross monthly amount of tideover benefit (<i>indemnité d'attente or indemnité professionnelle d'attente</i>)
Format	Character
Values	Income classes to be defined according to the "need to know" rule
Comments	Workers in external redeployment receive this benefit when the unemployment benefit ends. The calculation of this benefit changed with the 2015 law on the professional redeployment.
Source(s)	ADEM/CNAP



Name of the variable	i_F_early_retirement
Description	Whether receiving early retirement (<i>préretaire</i>)
Format	Character
Values	0 No 1 Yes
Comments	Admission to early retirement concerns in principle only employees of the private sector, except for civil servants concerned by shift work and night work.
Source(s)	CCSS

Name of the variable	i_early_retirement
Description	Gross monthly amount of early retirement (<i>préretaire</i>)
Format	Character
Values	Income classes to be defined according to the "need to know" rule
Comments	Admission to early retirement concerns in principle only employees of the private sector, except for civil servants concerned by shift work and night work.
Source(s)	CCSS



Name of the variable	i_F_invalid_pension
Description	Whether receiving an invalidity pension (<i>pension d'invalidité</i>)
Format	Character
Values	0 No 1 Yes
Comments	The pension is paid by the general or the public scheme. From the entitlement to old-age pension (at the age of 65 years), invalidity pension is replaced by old-age pension.
Source(s)	CNAP/ public schemes



Name of the variable	i_invalid_pension
Description	Gross monthly amount of the invalidity pension (<i>pension d'invalidité</i>)
Format	Character
Values	Income classes to be defined according to the "need to know" rule
Comments	The pension is paid by the general or the public scheme. From the entitlement to old-age pension (at the age of 65 years), invalidity pension is replaced by old-age pension
Source(s)	CNAP/ public schemes



Name of the variable	i_F_oldage_pension
Description	Whether receiving an old-age pension(<i>pension de vieillesse</i>)
Format	Character
Values	0 No 1 Yes
Comments	Including old-age anticipated pension and invalidity pension replaced by old-age pension at the age of 65 years. The pension is paid by the general or the public scheme.
Source(s)	CNAP/ public schemes



Name of the variable	i_oldage_pension
Description	Gross monthly amount of the old-age pension (<i>pension de vieillesse</i>)
Format	Character
Values	Income classes to be defined according to the "need to know" rule
Comments	Including old-age anticipated pension and invalidity pension replaced by old-age pension at the age of 65 years. The pension is paid by the general or the public scheme.
Source(s)	CNAP/ public schemes



Name of the variable	i_F_survivor_pension
Description	Whether receiving a survivor pension (<i>pension de survie</i>)
Format	Character
Values	  0 No 1 Yes
Comments	The pension is paid by the general or the public scheme.
Source(s)	CNAP/ public schemes

Name of the variable	i_survivor_pension
Description	Gross monthly amount of the survivor pension (<i>pension de survie</i>)
Format	Character
Values	  Classes to be defined according to the "need to know" rule
Comments	The pension is paid by the general or the public scheme.
Source(s)	CNAP/ public schemes

Name of the variable	i_F_orphan_pension
Description	Whether receiving an orphan pension (<i>pension d'orphelin</i>)
Format	Character
Values	  0 No 1 Yes
Comments	
Source(s)	CNAP/ public schemes



Name of the variable	i_orphan_pension
Description	Gross monthly amount of the orphan pension (<i>pension d'orphelin</i>)
Format	Character
Values	  Income classes to be defined according to the "need to know" rule
Comments	
Source(s)	CNAP/ public schemes



Name of the variable	i_F_child_rearing_fixed_allow
Description	Whether receiving fixed allowance for child-rearing (<i>forfait d'éducation=Mammerent</i>)
Format	Character
Values	0 No 1 Yes
Comments	The allowance is paid by the general or the public scheme or by the FNS.
Source(s)	CNAP/ public schemes/ FNS



Name of the variable	i_child_rearing_fixed_allow
Description	Gross monthly amount of fixed allowance for child-rearing (<i>forfait d'éducation=Mammerent</i>)
Format	Character
Comments	The allowance is paid by the general or the public scheme or by the FNS.
Source(s)	CNAP/ public schemes / FNS





3.5.3 Social assistance benefits



Name of the variable	i_F_min_income
Description	Whether the person belongs to a domestic community receiving the guaranteed minimum income supplementary allowance (<i>allocation complémentaire au titre du revenu minimum garanti - RMG</i>)
Format	Character
Values	  0 No 1 Yes and the person is beneficiary 2 Yes and the person is non-beneficiary
Comments	The supplementary allowance is fixed according to the composition and the incomes of the domestic community. Persons of the domestic community that could not fulfil the eligibility conditions for being beneficiary of the guaranteed minimum income supplementary allowance is a non-beneficiary.
Source(s)	FNS



Name of the variable	i_min_income
Description	Gross monthly amount of the guaranteed minimum income supplementary allowance (<i>allocation complémentaire au titre du revenu minimum garanti - RMG</i>) paid to the domestic community
Format	Character
Values	  Income classes to be defined according to the "need to know" rule
Comments	If several members composed the domestic community, the amount of the guaranteed minimum income supplementary allowance indicated for each is the same and corresponds to the total amount paid to the domestic community. So, it is not an individualised income which is impossible to calculate according to the ignorance of the sharing rules within the domestic community and of the financial situation of their members. Therefore, considering the whole amount for estimating the financial situation of the person results of an overestimation of the latest.
Source(s)	FNS



Name of the variable	i_nb_ind_min_income
Description	Size of the domestic community receiving the guaranteed minimum income supplementary allowance (<i>allocation complémentaire au titre du revenu minimum garanti - RMG</i>)
Format	Numeric
Values	 
Comments	This variable includes beneficiaries and non-beneficiaries. It is provided in view of an individualisation of the guaranteed minimum income supplementary allowance.
Source(s)	FNS



Name of the variable	i_nb_AB_min_income
Description	Number of Adult Beneficiaries (14 years old and more) in the domestic community receiving the guaranteed minimum income supplementary allowance (<i>allocation complémentaire au titre du revenu minimum garanti - RMG</i>)
Format	Numeric
Values	 
Comments	The variable is provided in view of an individualisation of the guaranteed minimum income supplementary allowance.
Source(s)	FNS





Name of the variable	i_nb_ANB_min_income
Description	Number of Adult Non-Beneficiaries (14 years old and more) in the domestic community receiving the guaranteed minimum income supplementary allowance (<i>allocation complémentaire au titre du revenu minimum garanti - RMG</i>)
Format	Numeric
Values	 
Comments	The variable is provided in view of an individualisation of the guaranteed minimum income supplementary allowance.
Source(s)	FNS



Name of the variable	i_nb_YB_min_income
Description	Number of Young Beneficiaries (less than 14 years) in the domestic community receiving the guaranteed minimum income supplementary allowance (<i>allocation complémentaire au titre du revenu minimum garanti - RMG</i>)
Format	Numeric (capped at 4 children)
Values	 
Comments	The variable is provided in view of an individualisation of the guaranteed minimum income supplementary allowance.
Source(s)	FNS



Name of the variable	i_nb_YNB_min_income
Description	Number of Young Non-Beneficiaries (less than 14 years) in the domestic community receiving the guaranteed minimum income supplementary allowance (<i>allocation complémentaire au titre du revenu minimum garanti - RMG</i>)
Format	Numeric
Values	 
Comments	The variable is provided in view of an individualisation of the guaranteed minimum income supplementary allowance.
Source(s)	FNS



Name of the variable	i_F_lifecost_allowance
Description	Whether the person belongs to a domestic community receiving the cost-of-living allowance (<i>allocation de vie chère</i>)
Format	Character
Values	  0 No 1 Yes
Comments	Before 2012, only the person of the domestic community to whom the cost-of-living is paid is known. Before this date, the information concerning the other members of the domestic community is not available. Before 2009, the cost-of-living allowance was named heating allowance (<i>allocation de chauffage</i>).
Source(s)	FNS





Name of the variable	i_lifecost_allowance
Description	Gross monthly amount of the cost-of-living allowance (<i>allocation de vie chère</i>) paid to the domestic community
Format	Character
Values	  Income classes to be defined according to the "need to know" rule
Comments	If several members compose the domestic community, the amount of cost-of-living allowance indicated for each is the same and corresponds to the total amount paid to the domestic community. So, it is not an individualised income which is impossible to calculate according to the ignorance of the sharing rules within the domestic community and of the financial situation of their members. Therefore, considering the whole amount for estimating the financial situation of the person results of an overestimation of the latest.
Source(s)	FNS

Name of the variable	i_nb_ind_lifecost
Description	Size of the domestic community receiving the cost-of-living allowance (<i>allocation de vie chère</i>)
Format	Numeric
Values	 
Comments	This variable is provided in view of an individualisation of the cost-of-living allowance. $nb_ind_alloc_vie_chere = nb_adul_alloc_vie_chere + nb_enf_alloc_vie_chere$
Source(s)	FNS

Name of the variable	i_nb_adults_lifecost
Description	Number of adults (14 years old and more) in the domestic community receiving the cost-of-living allowance (<i>allocation de vie chère</i>)
Format	Numeric
Values	 
Comments	This variable is provided in view of an individualisation of the cost-of-living allowance
Source(s)	FNS

Name of the variable	i_nb_children_lifecost
Description	Number of children (less than 14 years old) in the domestic community receiving the cost-of-living allowance (<i>allocation de vie chère</i>)
Format	Numeric
Values	 
Comments	This variable is provided in view of an individualisation of the cost-of-living allowance
Source(s)	FNS

Name of the variable	i_F_disable_allowance
Description	Whether receiving the income for seriously disabled persons (<i>revenu pour personnes gravement handicapées</i>) and/or the specific allowance for seriously disabled persons (<i>allocation spéciale pour personnes gravement handicapées</i>)
Format	Character
Values	  0 No 1 Yes
Comments	
Source(s)	FNS



Name of the variable	i_disable_allowance
Description	Gross monthly amount of the income for seriously disabled persons (<i>revenu pour personnes gravement handicapées</i>) and/or the specific allowance for seriously disabled persons (<i>allocation spéciale pour personnes gravement handicapées</i>)
Format	Character
Values	Income classes to be defined according to the "need to know" rule
Comments	
Source(s)	FNS

3.6 Work absences



Name of the variable	individual_IDnumber
Description	Pseudonymised individual identification number
Format	Character
Values	
Comments	
Source(s)	



Name of the variable	job_IDnumber
Description	Pseudonymised job identification number
Format	Numeric
Values	
Comments	
Source(s)	CCSS



Name of the variable	a_absence_type
Description	
Format	Character
Values	0 Illness 1 Maternity/special leave for adopted child 2 Work exemption for pregnant women 3 Injury 4 Family reasons leave 5 Palliative care leave (<i>congé d'accompagnement</i>)
Comments	Absences concern only workers from private scheme.
Source(s)	CCSS

Name of the variable	a_start_date
Description	
Format	Date yyyyymmdd
Values	
Comments	Absences concern only workers from private scheme.
Source(s)	CCSS



Name of the variable	a_end_date
Description	
Format	Date yyyyymmdd
Values	 
Comments	Absences concern only workers from private scheme.
Source(s)	CCSS

Name of the variable	a_length_absence
Description	Length of absence taking into account calendar days
Format	Numeric
Values	 
Comments	Absences concern only workers from private scheme.
Source(s)	CCSS

Name of the variable	a_diagnosis
Description	
Format	Character
Values	  http://apps.who.int/classifications/icd10/browse/Content/statichtml/ICD10Volume2_en_2016.pdf
Comments	Absences concern only workers from private scheme. Diagnosis are only available for resident persons. The ICD-10 classification is derived from a national classification.
Source(s)	CCSS

3.7 Family relationships

Name of the variable	parent_individual_IDnumber
Description	Parent pseudonymised individual identification number
Format	Character
Values	
Comments	
Source(s)	

Name of the variable	child_individual_IDnumber
Description	Child pseudonymised individual identification number
Format	Character
Values	
Comments	
Source(s)	

Name of the variable	spouse_individual_IDnumber
Description	Spouse pseudonymised individual identification number
Format	Character
Values	
Comments	
Source(s)	



Annex 1

Note méthodologique : Calcul du salaire horaire mensuel dans le cadre des données mises à disposition par la plateforme

english version available soon

Le salaire horaire est obtenu en rapportant un salaire mensuel à un nombre d'heures de travail mensuel. Dans les données administratives, ce dernier correspond au nombre d'heures effectivement ouvrées au cours du mois de référence. Or, le nombre d'heures effectivement ouvrées est soumis à un **effet calendrier** lié à la longueur des mois et au nombre de jours fériés, le cas échéant. Il est donc fondamental de corriger cet effet calendrier de façon à éviter des fluctuations artificielles du salaire horaire dans les trajectoires individuelles. L'objectif de cette note est d'expliquer la méthodologie appliquée pour détecter la présence d'un effet calendrier et la correction appliquée le cas échéant.

Un effet calendrier uniquement depuis le 1er janvier 2009

Les informations relatives aux salaires et au temps de travail sont collectées par le centre commun de la sécurité sociale et sont fournies par les employeurs chaque fin de mois. Les informations que doivent fournir les employeurs concernant le temps de travail sont différentes avant et après le 1^{er} janvier 2009, suite à l'introduction du statut unique.

Avant 2009, la déclaration mensuelle des employeurs au CCSS du nombre d'heures ouvrées par les salariés suivait les instructions suivantes :

- Quand le salarié était payé au mois (et non à la tâche), l'employeur déclarait toujours 173 heures (pour un temps complet). Ce nombre d'heures correspond à la moyenne mensualisée du nombre d'heures de travail annuel (incluant les jours fériés). Si le salarié était à temps partiel, l'employeur déclarait un nombre d'heures au prorata du temps de travail.
- Quand le salarié était payé à la tâche, l'employeur indiquait le nombre d'heures de travail effectives (puisque le salaire est calculé en fonction de ce dernier, contrairement aux personnes payées au mois).
- Si le salarié faisait des heures supplémentaires un mois donné, leur nombre n'était pas déclaré séparément mais ajouté au nombre d'heures de base, c'est-à-dire tel que défini par le contrat de travail.



Depuis 2009, les employeurs doivent déclarer dans tous les cas le nombre d'heures de travail **effectives**.

Plus précisément, les instructions sont les suivantes :

- Quand le salarié est payé au mois, l'employeur doit désormais indiquer le nombre d'heures de travail effectivement ouvrées, ce dernier variant d'un mois à l'autre de 144 heures à 184 heures en fonction de la longueur du mois et du nombre de jours fériés. Si le salarié est à temps partiel, l'employeur doit déclarer un nombre d'heures au prorata du nombre d'heures ouvrées du mois. Tous les ans, le CCSS fournit un tableau contenant pour chaque mois le nombre d'heures ouvrées pour une personne travaillant à temps complet. Ce nombre d'heures, appelé **théorique**, tient compte des jours fériés de sorte à obtenir le nombre d'heures de travail effectives.
- Quand le salarié est payé à la tâche, l'employeur indique, comme avant 2009, le nombre d'heures de travail effectives.
- Si le salarié fait des heures supplémentaires un mois donné, leur nombre doit désormais être déclaré séparément des heures de base.

Information sur le nombre d'heures de travail...	Avant 01/01/2009	Après avant 01/01/2009
... d'un salarié payé au mois	173 si temps complet	Nombre d'heures effectives, entre 144 et 184 selon le mois
... d'un salarié payé à la tâche	Nombre d'heures effectives	Nombre d'heures effectives
... d'un salarié prestant des heures supplémentaires	Additionnées au nombre d'heures de base	Déclarées séparément

Quelles sont les conséquences de ce changement du point de vue du salaire horaire ?

- Pour les salariés payés à la tâche, il n'y a pas de conséquence ; avant 2009 comme après, le rapport entre le salaire et le nombre d'heures de travail fournit une estimation correcte du salaire horaire. Après 2009, il est en outre possible de distinguer le salaire horaire de base et le salaire horaire total (puisque les heures supplémentaires sont déclarées séparément).
- Pour les salariés payés au mois, le salaire horaire avant 2009 demeurait stable si le salaire et le temps de travail du salarié l'étaient également. En revanche, après 2009, le salaire va varier d'un mois à l'autre uniquement du fait de l'effet calendrier.

En résumé, il existe à partir de 2009 un effet calendrier pour les salariés payés au mois tandis qu'il n'en existe pas pour les salariés payés à la tâche.



Détection et correction de l'effet calendrier

Pour neutraliser ces variations artificielles du salaire horaire, l'objectif est de détecter les cas où la série mensuelle des heures effectivement ouvrées (hors heures supplémentaires) est identique à celle des heures théoriques. Le cas échéant (si les deux séries sont identiques ou quasi identiques), il existe un effet calendrier qui peut ainsi être neutralisé en ramenant la série au nombre d'heures moyen (173 heures pour un temps complet). Compte tenu de ce qui précède, cet effet calendrier ne devrait être détecté que pour des salariés payés au mois, puisqu'il n'existe aucune raison (autre que le hasard) pour qu'un salarié payé à la tâche travaille chaque mois exactement le nombre d'heures théorique.

Il peut paraître simple a priori d'établir la similitude ou la quasi similitude des deux séries mensuelles, celle des heures effectivement ouvrées et celle des heures théoriques. Pourtant ce n'est pas le cas : les analyses exploratoires menées sur les données administratives mettent en évidence le fait que le nombre d'heures de travail mensuel d'un salarié payé au mois (hors heures supplémentaires) peut ne pas correspondre tous les mois au nombre d'heures théorique. Les raisons de ces écarts sont indéterminées et reflètent probablement soit des erreurs de déclarations, soit des ajustements de nature administrative qu'il nous est impossible de circonscrire. A contrario, un individu peut, par le jeu du hasard du calendrier, avoir au cours de plusieurs mois par an un nombre d'heures de travail effectif identique au nombre d'heures théorique sans qu'il soit pour autant payé au mois.

Il a donc fallu renoncer à la possibilité d'établir avec certitude l'existence d'un effet calendrier. En revanche, il est possible de proposer une procédure permettant de l'identifier avec une "forte" probabilité". La règle qui a été adoptée est la suivante : **la probabilité d'un effet calendrier est forte si le nombre d'heures ouvrées est identique au nombre d'heures théorique plus de X fois sur les 13 premiers mois de l'occupation**. Cette règle se justifie par les éléments suivants :

- L'existence d'un effet calendrier est diagnostiquée au début de l'emploi. Le cas échéant, le nombre d'heures sera corrigé de l'effet calendrier sur toute la période de l'emploi (il est en effet très peu probable qu'un salarié ayant démarré une activité payée au mois bascule pour ce même emploi à une rémunération à la tâche / l'inverse est également peu probable)
- Les analyses exploratoires menées sur les données administratives ont mis en évidence qu'il était nécessaire de retenir une période relativement longue pour diagnostiquer l'effet calendrier. Après plusieurs tests de sensibilité, nous avons retenu une période de 12 mois couvrant la période $m+1/m+13$. Nous excluons le premier mois car dans de nombreux cas, le contrat démarre en cours



de mois. En conséquence, pour les emplois ayant une durée inférieure ou égale à 12 mois, le salaire horaire mensuel corrigé de l'effet calendrier n'est pas fourni¹.

Pour les emplois ayant une durée supérieure à 13 mois, il reste maintenant à déterminer la valeur de X : combien de fois, au cours de la période $m+1/m+13$, le nombre d'heures ouvrées du salarié doit-il être identique au nombre d'heures théorique pour considérer que la probabilité d'un effet calendrier est élevée ?

On pourrait tout à fait imaginer que par le fruit du hasard un salarié payé à la tâche et travaillant en poste puisse prêter plusieurs mois dans l'année un nombre d'heures identique au nombre d'heures théorique. Cette situation est d'autant plus probable que le nombre d'heures théorique possède assez peu de valeurs différentes possibles (il peut être égal à 144, 152, 160, 168, 176 ou 184). C'est la raison pour laquelle, X est défini comme le nombre maximum de fois où le nombre d'heures théorique mensuel prend la même valeur au cours de la période $m+1/m+13$.

Exemple : un salarié démarre son activité en décembre 2017. La période de référence sur laquelle est estimée la probabilité d'un effet calendrier débute en janvier 2018 et s'achève en décembre 2018. Le tableau ci-dessous (fourni annuellement par le CCSS) indique le nombre d'heures théorique pour chaque mois.

	Heures théoriques	Nombre de jours de travail	Nombre de jours fériés
janv.2018	176	22	1
févr.2018	160	20	0
mars-18	176	22	0
avr.2018	160	20	1
mai.2018	160	20	3
juin.2018	168	21	0
juil.2018	176	22	0
août.2018	176	22	1
sept.2018	160	20	0
oct.2018	184	23	0
nov.2018	168	21	1
déc.2018	152	19	2

¹ Nous préconisons pour ces cas de calculer un salaire horaire moyen sur l'ensemble de l'occupation. Cette procédure n'est pas préjudiciable dans la mesure où il est rare de vouloir analyser l'évolution du salaire sur une durée si courte.



Au cours de la période étudiée, le nombre d'heures théorique prend différentes valeurs. Pour chaque valeur, nous calculons le nombre d'occurrences : par exemple, la valeur 152 n'est observée qu'une seule fois entre janvier et décembre 2018. L'occurrence maximum est 4. Autrement dit, la valeur qui est observée le plus souvent (160) l'est à 4 reprises.

Valeurs prises par le nombre d'heures théorique	152 h.	160 h.	168 h.	176 h.	184 h.
Occurrence	1	4	2	4	1

Ainsi, on considèrera qu'il existe un effet calendrier si le nombre d'heures ouvrées (hors heures supplémentaires) est égal au nombre d'heures théorique plus de 4 fois au cours des 12 mois couvrant la période janvier 2018-décembre 2018.

	Nombre d'heures théorique	Nombre de jours de travail	Nombre de jours fériés	Nombre d'heures prestées (hors heures supplémentaires)
janv.2018	176	22	1	168
févr.2018	160	20	0	160
mars-18	176	22	0	168
avr.2018	160	20	1	160
mai.2018	160	20	3	168
juin.2018	168	21	0	160
juil.2018	176	22	0	168
août.2018	176	22	1	160
sept.2018	160	20	0	168
oct.2018	184	23	0	176
nov.2018	168	21	1	160
déc.2018	152	19	2	168

Dans l'exemple présenté ci-dessus, le nombre d'heures ouvrées est égal au nombre d'heures théorique 2 fois au cours des 12 mois couvrant la période janvier 2018-décembre 2018. On considère donc qu'il n'existe pas d'effet calendrier ($2 < 4$).

Dans le second exemple présenté ci-dessous, le nombre d'heures ouvrées est égale au nombre d'heures théorique 10 fois au cours des 12 mois couvrant la période janvier 2018-décembre 2018. On considère donc qu'il existe un effet. La série mensuelle des heures ouvrées est corrigée en ramenant la série à une moyenne mensuelle de 173 heures (cf. dernière colonne du tableau).



	Nombre d'heures théorique	Nombre de jours de travail	Nombre de jours fériés	Nombre d'heures prestées (hors heures supplémentaires)	Nombre d'heures prestées corrigé (=heures prestées*173/heures théoriques)
janv.2018	176	22	1	176	$176*173/176 = 173$
févr.2018	160	20	0	160	$160*173/160 = 173$
mars-18	176	22	0	176	$176*173/176 = 173$
avr.2018	160	20	1	156	$156*173/160 = 168$
mai.2018	160	20	3	160	$160*173/160 = 173$
juin.2018	168	21	0	168	$168*173/168 = 173$
juil.2018	176	22	0	176	$176*173/176 = 173$
août.2018	176	22	1	176	$176*173/176 = 173$
sept.2018	160	20	0	156	$156*173/160 = 168$
oct.2018	184	23	0	184	$184*173/184 = 173$
nov.2018	168	21	1	168	$168*173/168 = 173$
déc.2018	152	19	2	152	$152*173/152 = 173$

En termes de trajectoires individuelles, la procédure appliquée permet de neutraliser les fluctuations artificielles du salaire horaire dues à l'effet calendrier (cf. graphique ci-dessous).

