

## MAIN RESULTS OF THE POST ENUMERATION CENSUSES AS OF SEPTEMBER 7, 2021

Pursuant to Art. 38 of the 2021 Population and Housing Census in the Republic of Bulgaria Act (promulgated SG No. 20 of March 8, 2019), the National Statistical Institute conducted post enumeration sample surveys to check the accuracy of the registered data and the completeness of the coverage of the units of observation.

The field work for the post enumeration surveys started on October 11, 2021, immediately after the end of the census, and ended on October 31, 2021. The post enumeration surveys interviewers were NSI employees, experts on the census methodology and experienced in conducting household sample surveys. In order to ensure a high response rate, visits were made every day from 8:00 a.m. to 8:00 p.m., including during the weekends. Post enumeration surveys were carried out via electronic devices with a specially developed data collection tool.

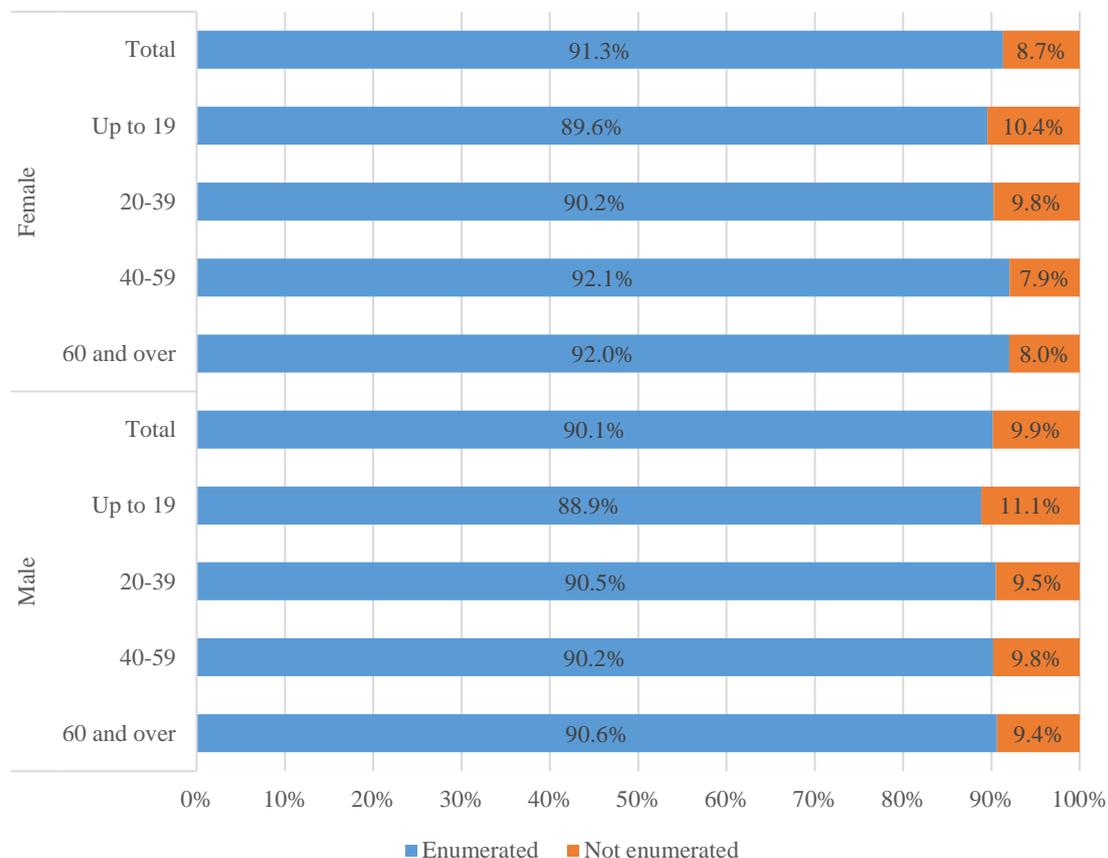
### **1. Post enumeration survey for the completeness of the coverage**

The post enumeration survey for the completeness of the coverage of the population census as of September 7, 2021 covered 7 210 dwellings and 19 306 persons. The main objective of this survey was to measure the population coverage errors total for the country by estimating the relative share of persons who were not enumerated (were missed) and to measure the errors made when distributing the persons according to the definition 'usual residence'.

#### **1.1. Persons not enumerated**

The results of the post enumeration survey confirm the conclusions already made about a significant share of not enumerated persons. During the inspections, 1 596 persons were found who neither got counted electronically, nor were visited by an enumerator. Not enumerated males predominate (9.9%) over the not enumerated females (8.7%). The relative share of not enumerated persons under the age of 19 is the highest.

**Fig. 1. Distribution of persons enumerated and not enumerated according to the post enumeration survey results by age group and sex**



According to the results of the post enumeration survey for the completeness of the coverage, there are significant differences in the relative share of not enumerated persons by place of residence - in rural areas, this share was 5.8%, while in urban areas, it was almost twice as high - 10.5%.

The relation of the post enumeration survey results to the total population of the country shows that the number of persons not enumerated was between 573.9 and 631.0 thousand persons, or 9.2% of the country's population.

**Table 1. Stochastic reliability<sup>1</sup> of the results of the post enumeration survey for the completeness of the coverage of the population census as of September 7, 2021 as regards the not enumerated persons by sex**

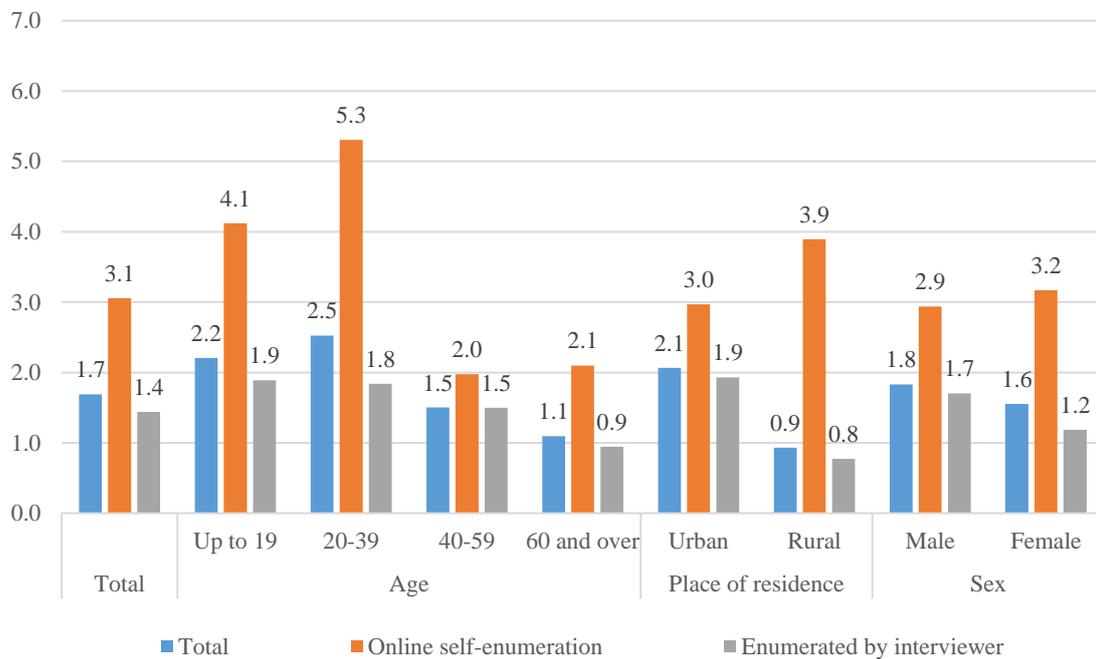
	Estimate	Standard Error	Confidence Interval		Coefficient of Variation
			Lower	Upper	
Not enumerated persons - relative share	0.0924	0.0022	0.0880	0.0968	0.0242
Not enumerated persons - number	602436	14560	573898	630974	0.0242
Not enumerated males - relative share	0.0985	0.0033	0.0920	0.1050	0.0336
Not enumerated males - number	313190	10849	291924	334456	0.0346
Not enumerated females - relative share	0.0866	0.0031	0.0806	0.0926	0.0356
Not enumerated females - number	289246	10551	268566	309926	0.0365

## 1.2. Errors in identifying usual residence

According to the census methodology, persons shall be enumerated according to their 'usual residence' - the place where a person normally spends the daily period of rest, regardless of temporary absences for purposes of recreation, holidays, visits to friends and relatives, business, medical treatment or religious pilgrimage. During the post enumeration survey for the completeness of the coverage, 326 cases of incorrectly enumerated persons according to this definition were identified. The incorrectly enumerated persons according to their usual residence in the age group 20 - 39 years old predominate (2.5% of the persons who were checked), followed by persons aged 0 - 19 (2.2%). The relative share of this indicator among men (1.8%) is slightly higher than among women (1.6%). The usual residence was incorrectly identified for 2.1% of those living in urban areas and for 0.9% of those living in rural areas.

<sup>1</sup> The stochastic reliability of all results presented is calculated at confidence level  $P(Z)=0.95$ .

**Fig. 2. Distribution of incorrectly enumerated persons according to the definition ‘usual residence’ by age, place of residence, sex and method of enumeration**



The results of the post enumeration survey show that the incorrectly enumerated persons according to their usual place of residence were mainly those who got counted electronically (3.1%) compared to those enumerated by an enumerator (1.4%).

The survey results in relation to the total population of the country show that the relative share of persons incorrectly enumerated according to their usual residence was between 1.7% and 2.2%.

**Table 2. Stochastic reliability of the results of the post enumeration survey for the completeness of the coverage of the population census as of September 7, 2021 as regards the incorrectly enumerated persons according to their place of residence by sex**

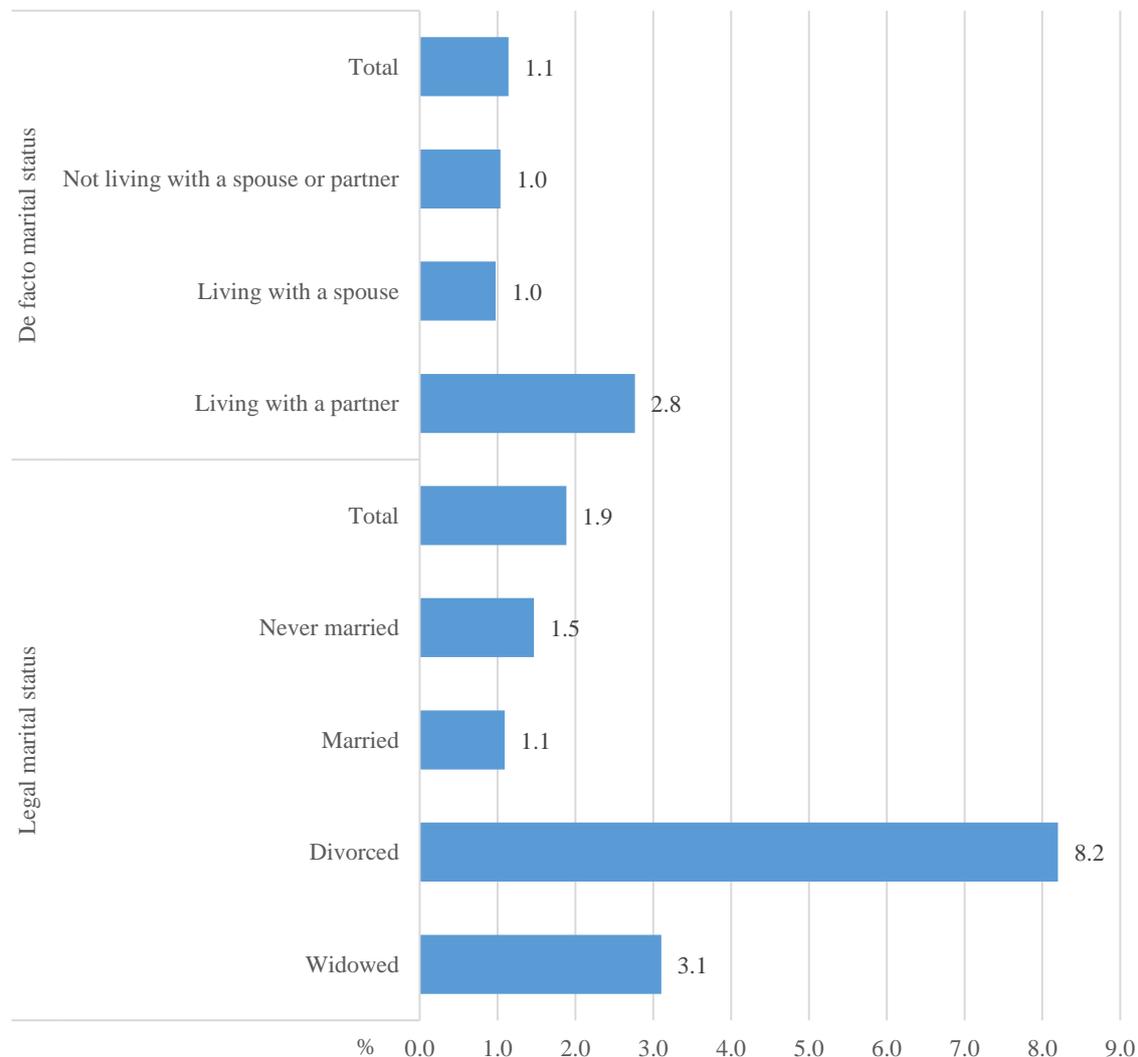
	Estimate	Standard Error	Confidence Interval		Coefficient of Variation
			Lower	Upper	
Incorrectly enumerated persons by usual residence - relative share	0.0194	0.0011	0.0173	0.0216	0.0565
Incorrectly enumerated persons by usual residence - number	126564	7157	112535	140592	0.0565
Incorrectly enumerated males by usual residence - relative share	0.0209	0.0016	0.0177	0.0241	0.0776
Incorrectly enumerated males by usual residence - number	66405	5185	56242	76568	0.0781
Incorrectly enumerated females by usual residence - relative share	0.0180	0.0015	0.0151	0.0209	0.0830
Incorrectly enumerated females by usual residence - number	60159	5017	50325	69992	0.0834

## 2. Post enumeration survey on accuracy of the registered data

The main purpose of the post enumeration survey on the accuracy of the registered data is to assess the information gathered by the 2021 Census with regard to the correctness of the data collected about the population and housing. 2 001 dwellings and 5 257 persons were checked.

In the post enumeration survey on the accuracy of the registered data, 99 cases (1.9% of the persons who were checked) of incorrect reporting of the legal marital status and 60 cases (1.1%) of incorrect reporting of the de facto marital status were identified.

**Fig. 3. Relative share of persons incorrectly enumerated according to the definitions ‘legal marital status’ and ‘de facto marital status’**



The relative share of divorced persons, for whom an incorrect category of legal marital status was reported during the census, was the highest. Regarding the de facto marital status, the share of incorrect reporting was the highest for the persons living in consensual union.

During the post enumeration survey, 26 cases (0.5% of the persons who were checked) of incorrect reporting on the answer to the question ‘H14. Have you resided outside Bulgaria during the period 1980 - 2021 for more than one year?’ were registered. For 18 persons (0.3%), the period abroad was not stated, and for 8 persons (0.2%), such a period was incorrectly recorded.

During the post enumeration survey, 53 persons (1.1% of the persons aged 15 and over who were checked) were identified for whom their current activity status was stated incorrectly during the census.

**Table 3. Distribution of the results of the post enumeration survey as regards the current activity status**

	Persons who were checked - total	Correctly enumerated in the census		Incorrectly enumerated in the census	
		number	%	number	%
<b>Total</b>	<b>4730</b>	<b>4677</b>	<b>98.9</b>	<b>53</b>	<b>1.1</b>
Yes, for pay or profit, in cash or in kind	1982	1958	98.8	24	1.2
Yes, in own business, freelance job or other self-employment activity	119	117	98.3	2	1.7
Yes, in production of agricultural products intended primarily for sale or barter	28	26	92.9	2	7.1
No, but I had a job I was absent from (e.g. due to holiday or vacation, including maternity or parental leave, illness or injury, etc.)	47	42	89.4	5	10.6
No, I did not work and I did not have a job	2554	2534	99.2	20	0.8

In the post enumeration survey, 10 cases with incorrectly stated main job were identified (0.1% of the persons who were checked).

The stochastic reliability of the results of the post enumeration survey for the main characteristics observed is at a sufficient level.

**Table 4. Stochastic reliability of the results of the post enumeration survey on accuracy of the registered data by characteristics observed**

	Estimate	Standard Error	Confidence Interval		Coefficient of Variation
			Lower	Upper	
Incorrectly enumerated persons according to the definition 'legal marital status' - %	0.0224	0.00238	0.0178	0.0271	0.106
Incorrectly enumerated persons according to the definition 'de facto marital status' - %	0.0122	0.00172	0.0089	0.0156	0.140
Incorrectly enumerated persons according to the definition 'living outside Bulgaria during the period 1980 - 2021 for more than one year' - %	0.0055	0.00114	0.0032	0.0077	0.208
Incorrectly enumerated persons according to the definition 'current activity status' - %	0.0105	0.00153	0.0075	0.0135	0.146
Incorrectly enumerated persons according to the definition 'main job' - %	0.0019	0.00061	0.0007	0.0031	0.320
Incorrectly enumerated persons according to the definition 'legal marital status' - number	146297	15529	115854	176739	0.106
Incorrectly enumerated persons according to the definition 'de facto marital status' - number	79673	11190	57736	101610	0.140
Incorrectly enumerated persons according to the definition 'living outside Bulgaria during the period 1980 - 2021 for more than one year' - number	35700	7441	21113	50288	0.208
Incorrectly enumerated persons according to the definition 'current activity status' - number	68247	9953	48734	87760	0.146
Incorrectly enumerated persons according to the definition 'main job' - number	12396	3970	4613	20178	0.320

The schedule for publishing Census 2021 data can be found [here](#). Basic data from the census will be published on the INFOSTAT Information System, as well as provided upon user request in accordance with the [List of standard statistical indicators](#) and the [Regulations for dissemination of statistical products and services](#).