

## OVERVIEW OF PUBLIC FUNDING, NUMBER OF ENROLLED STUDENTS AND GRADUATES IN HIGHER EDUCATION IN SLOVENIA

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### **Abstract:**

We focus on analysing public funding of higher education, focusing on direct expenditure on higher education institutions, and on trends and numbers of enrolled full-time students as well as full-time graduates. The aim of the paper is to give an overview of the current funding numbers and provide insight on the funding indicators in the post crisis period in Slovenia. We used publicly available data from the website of Ministry of Education, Science and Sport on higher education funding in the period 2010-2018. Our analysis reveals that public funding of higher education institutions on study activities has finally reached the amount spend in the pre-crisis period and is slowly rising. Student enrolments are still dropping while the numbers of higher education graduates are slowly increasing, with an exception in 2016 when the graduation from pre-Bologna study programmes was still possible.

*Keywords: public funding, higher education, public expenditure, Slovenia, students, graduates*

## 1. INTRODUCTION

In a society where knowledge is perceived as "capital" (a knowledge), higher education is regarded to affect the competitiveness and innovation of the economy while stimulating economic and social development.

Publicly funded higher education systems and cyclical economic developments are interrelated, especially when we observe public spending in the times of crisis (White in Musser 1978, p. 177; Skrbinjek et al., 2017). A comprehensive impact of economic crisis on higher education funding in European countries was studied in the research of Skrbinjek, Lesjak, Šušteršič (2018). After 2008, the deterioration of economic conditions through the weakening of national fiscal positions was reflected on budgetary resources allocated to education and higher education (Zumeta in Kinne 2011, p. 29). Decreasing public spending for higher education was evident in almost all European countries (EUA, 2013). The decreasing financial spending for higher education was present despite the fact that higher education investments should help to strengthen the economy and contribute to a faster recovery after the crisis. Resulting from a direct impact on the promotion of economic activity by creating new jobs, attracting foreign (economic, human and social) capital and for many employees in higher education represents an important source of income (Varghese 2010, p. 11). In particular, the long-term outlook is particularly weak because of the negative impact on human capital, innovation, research and development (Bahmani 2011, p. 6).

For a successful transition into a knowledge-based society, the governments of European countries promoted access and integration in higher education in order to increase the share of the population with higher education who will despite the aging of the population allow higher productivity of employees and consequently higher economic growth. The global economic crisis has shown how the higher education sector is vulnerable and unprepared for macroeconomic changes in the economy and society (Leonard, 2014). According to Leonard (2014), a proactive and not a reactive approach or response to macroeconomic imbalances is needed in order to minimize damage to higher education (students, academics and other employees).

Higher education has been traditionally strongly dominated by public provision and government regulation, especially in Europe (Teixeira, 2017, p. 12), where Slovenia was no exception and the public funding is still one of the highly debated topics. In the last decade private higher education in Slovenia gained importance, similar to global trends in other parts of the world. Although, the private higher education sector in Slovenia is not large, it accounts for 13% of enrolled students (full time and part time studies combined). Private higher education institutions today are accountable to public authorities since they tend to face the same regulation and regulatory bodies as do public ones (Teixeira, 2017, p. 3). Higher education in Slovenia comprises of public and private higher education institutions, where some private higher education institutions can be funded publically (were granted a concession on study programmes).

The Higher education Act (HEA) in Slovenia regulates the status of higher education institutions, the conditions for pursuing higher education, defines public service in higher education and regulates the way in which it is financed. Slovenian citizens have the right to study at higher education institutions in the Republic of Slovenia under the same conditions as the nationals of other EU Member States. In addition, the Decree on public financing of higher education institutions and other institutions (Decree, Official Gazette, no. 35, 2017) regulates in detail the allocation of public funding for the study activities of the full-time study programs for the first and second levels and the extracurricular activities of students in public higher education institutions and private higher education institutions with concessionary study programs. This means that full-time studies at the first and second levels of the Bologna structure are funded by the government if the student has not already obtained the same level of education. Higher education institutions charge fees for part-time studies and for study programmes not funded from public sources and also for supplementary study programmes (Ministry of Education, Science and Sport, 2019).

In this paper we focus on analysing the trends in public funding of higher education full-time studies, enrolled students in full-time study and graduates. The aim of the paper is to give an overview of the current funding numbers (from 2010 until 2018), and provide insight on the funding indicators in the post crisis period. For this purpose, a research question was formed: *What are the public funding trends in post-crisis period and what indicators are used for public funding of higher education institutions in Slovenia?*

Next section describes the data and methods used. Three subsequent sections cover an overview of the trends and numbers of public funding, students and graduates, as well as to deepen the understanding of the funding system in Slovenia. Lastly, in the conclusion the results are presented in robust manner.

## 2. METHODS AND DATA

A descriptive analysis of secondary sources was done for public funding data (in EUR), numbers of full time students and graduates, both as the main (input) indicators for distributing public funds to higher education institutions.

For this analysis publicly available data from the website of Slovenia's Ministry of Education, Science and Sport and Statistical Office of Slovenia was used. We focused on analysing current public funding on higher education institutions, focusing on direct expenditure on higher education institutions full-time studies, and on trends and numbers of enrolled full-time students as well as full-time graduates. In this regard, the data on public funding, students and graduates was available from 2010 onwards.

We also analysed numbers of 19 year old individuals in Slovenia for which the data was taken from the Statistical Office. This data was available from 2008 until 2018. We then combined it with the projections data until year 2030.

To capture the trends of economic activity in Slovenia, we also combined data on the GDP per capita with public funding data. The data on GDP per capita was also taken from the Statistical Office of Slovenia for the same years to match the public funding data.

## 3. PUBLIC EXPENDITURE ON HIGHER EDUCATION INSTITUTIONS

### 3.1. Funding system in Slovenia

The economic crisis in Slovenia coincided with the last phase of the implementation of the Bologna process in higher education institutions and just before the demographic decline of the number of young candidates for enrolment in higher education (see Picture 2). First budgetary cuts for higher education activities were introduced in 2012. Public expenditure on tertiary education in the share of GDP was dropping since 2012 and was below 1 % in 2015 (Eurostat database, 2019). However, the funding system of higher education institutions has changed in 2016 with the changes to the Higher education Act (HEA, Official Gazette no. 75, 2016), when additional articles no. 72 were added. Articles 72 in HEA define a new structure of public funding of the public and private higher education institutions (with concessions). Funds are distributed according to a four years contracts. Among others, the article 72.b states that "public funds for study activities are provided at an annual level of at least 1% of GDP", ensuring a stable funding hereafter.

According to the 72 articles (HEA, Official Gazette no. 75, 2016), the majority of funds are allocated with the Basic pillar (BPF), which consists of fixed basic pillar (f-BPF) and variable basic pillar (v-BPF). The v-BPF pillar can amount up to 25 % of BPF, eg. in 2018 it amounted to 3.4%. The v-BPF pillar increases every 2 years, if a higher education institution does not meet the requirements of sufficient number of students and graduates. In this case, the f-BPF-Z (fixed Basic pillar of a particular higher education institution) decreases and is distributed to v-BPF. From v-BPF the funds are allocated to higher education institutions according to 6 indicators:

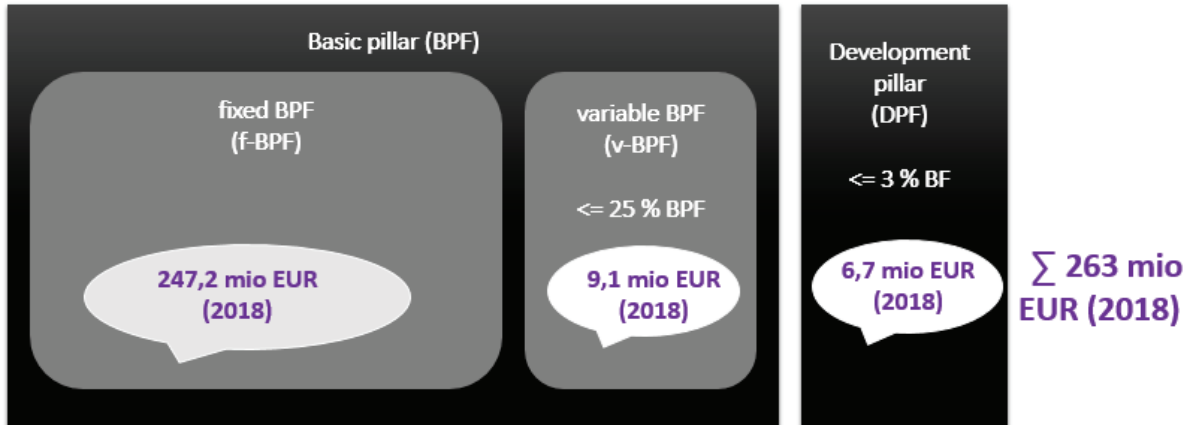
1. *Students indicator*: number of enrolled students in full time studies (first year Bachelor students are not included; multiplied by study group factor),
2. *Graduates indicator*: number of graduates in full time studies (multiplied with the duration of study and study group factor),
3. *Publishing indicator*: the share of scientific publications of a higher education institution;
4. *RD indicator*: the share of funds for research, development and market activity;
5. *Employability indicator*: share of employed graduates;
6. *Art indicator*: the number of all habilitated higher education professors by the artistic criteria working at a higher education institution.

Variable pillar (v-BPF) is then distributed on the above indicators to a higher education institution according to their performance in comparison with other higher education institutions every 2 years—introducing a competitive funding approach.

A smaller amount – 3 % of all public funds can be allocated for development tasks from Development pillar (DPF). DPF funds are allocated with the intention to stimulate the development of goals and activities related to specific areas: the quality of study, internationalisation, knowledge transfer, cooperation with other stakeholders, scientific, research and artistic creativity and social dimensions (HEA, 2016, article 72.f). Part of the DPF is negotiated with the Ministry officials.

Full time doctoral study can be also publicly co-funded, according to the conditions of Decree on the co-funding of doctoral studies (Official Gazette, no. 22, 2017).

**Picture 1:** Structure of Higher education funding system, public funds allocated in 2018



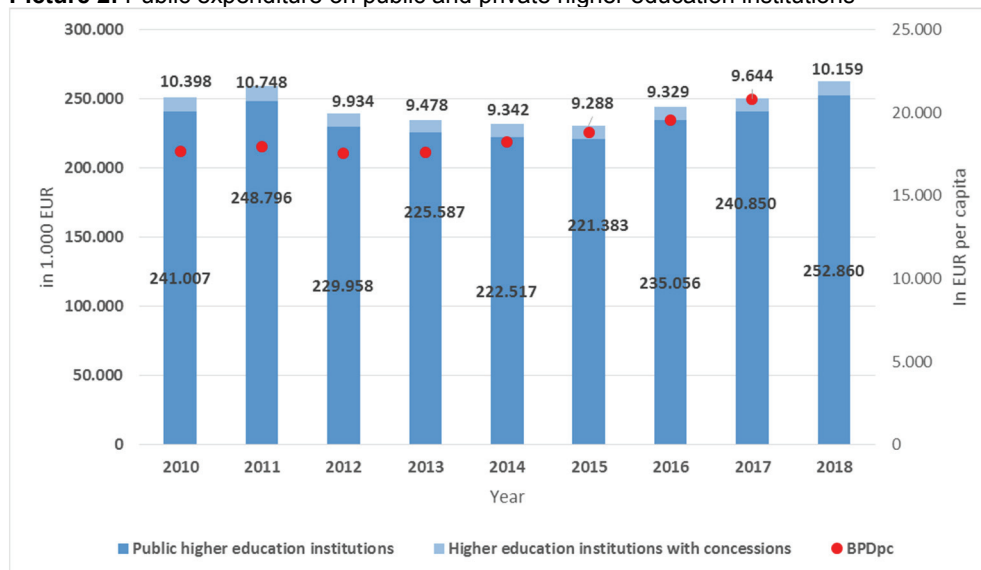
Source: Ministry of Education, Science and Sport, 2019.

### 3.2. Analysis of public expenditure

Most public funds for financing the study activity were allocated to public higher education institutions and approximately 4 % of public funds were distributed to private higher education institutions with concessions (Picture 2). Red dots on Picture 2 demonstrate the GDP per capita (in EUR, current prices and at current exchange rate). While the GDP per capita was the lowest during 2010 and 2013, the public expenditure on higher education institutions started to decline with some delay. The lowest drop of public funding of higher education institutions was 13.1 % in 2014 (compared to 2010), where the lowest drop of GDP per capita was not as severe (6.5 % in 2012, compared to 2008).

In total, the public expenditure for higher education institutions was increasing for the last three years and in 2018 (for the first time) already exceeded the (nominal) value of 2011, year before reduction. Increasing public funds were also a good sign that the economic conditions started to improve in Slovenia.

**Picture 2:** Public expenditure on public and private higher education institutions



Source: Ministry of Education, Science and Sport, 2019; SORS, 2019.

## 4. STUDENT ENROLMENTS (FULL-TIME STUDY)

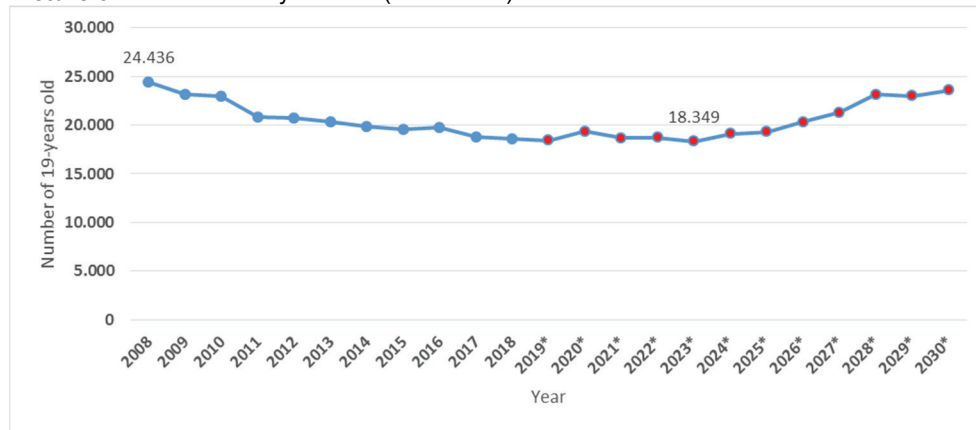
Student enrolments are influenced by many factors, in particular access policies for higher education, the system of student financial assistance, the demand for higher education in the labour market and demographic trends (Eurydice 2011, str. 33). According to projections, by 2020, the proportion of students in the typical age group will decline due to demographic decline. Projections of demographic change in the most typical age group of young (18-34 years) candidates for inclusion in higher education

show an average decline of their number by 20% by 2025 in the countries of Central, Eastern and Southern Europe; and by more than 30% in Bulgaria, Latvia, Poland, Romania and Slovenia (Eurydice 2011, p. 34). The opposite trend will be present in Denmark, Luxembourg, the Netherlands, Great Britain and Norway (Eurydice 2011, p. 34).

Picture 3 demonstrates the declining trend of 19-years old young individuals in Slovenia. According to projections of Statistical Office of Slovenia (SORS, 2019), the number of 19 year olds will continue to slightly decline at least until 2025, reaching bottom in 2023 (reducing by a quarter; 18.349 in 2023 compared to 24.436 in 2008), while slowly rising afterwards. However, the numbers in 2030 do not seem likely to reach the 2008 values.

Student numbers are one of the most important criteria when calculating the basic pillar (fixed and variable) funds to higher education institutions. With declining trends of candidates the competition for students enrolled in full time studies will increase.

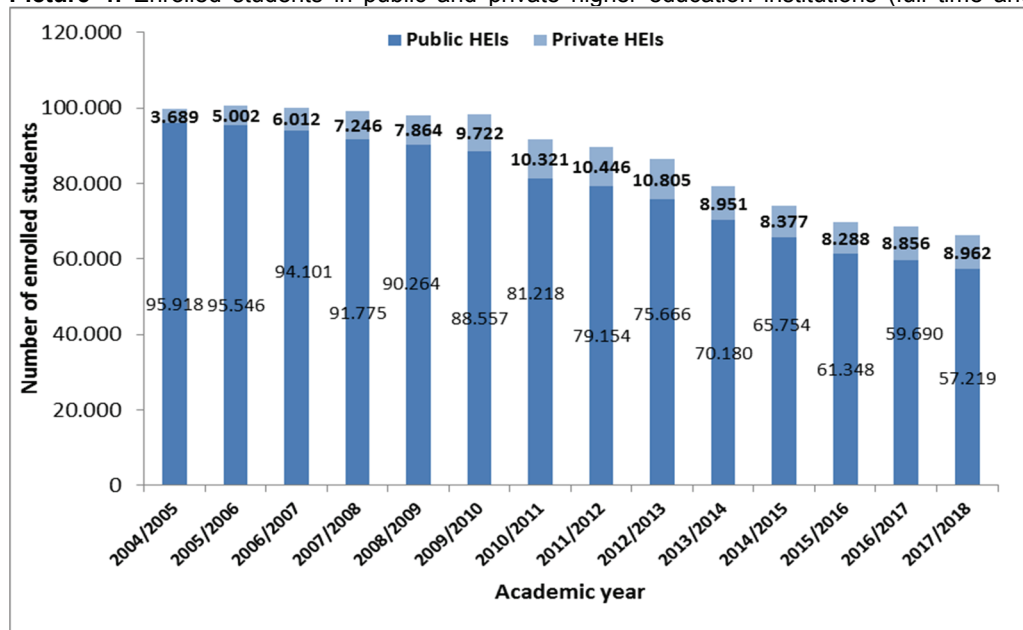
**Picture 3:** Number of 19-year olds (2008-2030)



Source: SORS, 2019. Red dots – predictions from 2019 to 2030.

Picture 4 reveals trends of enrolled students in public and private higher education institutions (covering full time and part time studies). The numbers are constantly dropping since 2008, more evidently in public than in private higher education institutions. While we can observe an increase in student numbers in private higher education institutions in years 2010, 2011 and 2012. After 2012 the numbers of all students decreased substantially in public higher education institutions.

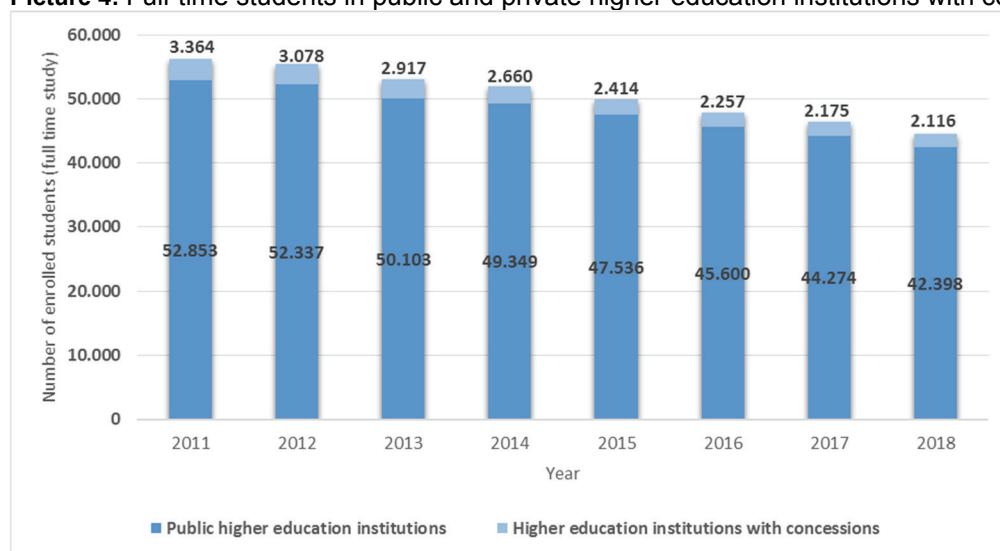
**Picture 4:** Enrolled students in public and private higher education institutions (full time and part time study)



Source: SORS, 2019.

Number of students enrolled in full-time studies in total is also decreasing since 2011. A general decrease from 56,000 in 2011 to nearly 44,500 in 2018 amounts to decrease of more than one fifth. In private higher education institutions with concessions the decrease was even larger, 37 % less students enrolled in full-time studies at private higher education institutions. The decreasing trend is expected until mid. 2020, when the demography trajectory will be positive again. However, there are also other factors that could impact the overall trend, especially the demand for higher education graduates in the labour market and most importantly the quality of knowledge, skills and qualifications of higher education learning. The emphasis on learning outcomes of study programmes is gaining importance in national quality evaluation frameworks. These are the areas higher education institutions will need to work on.

**Picture 4:** Full-time students in public and private higher education institutions with concession

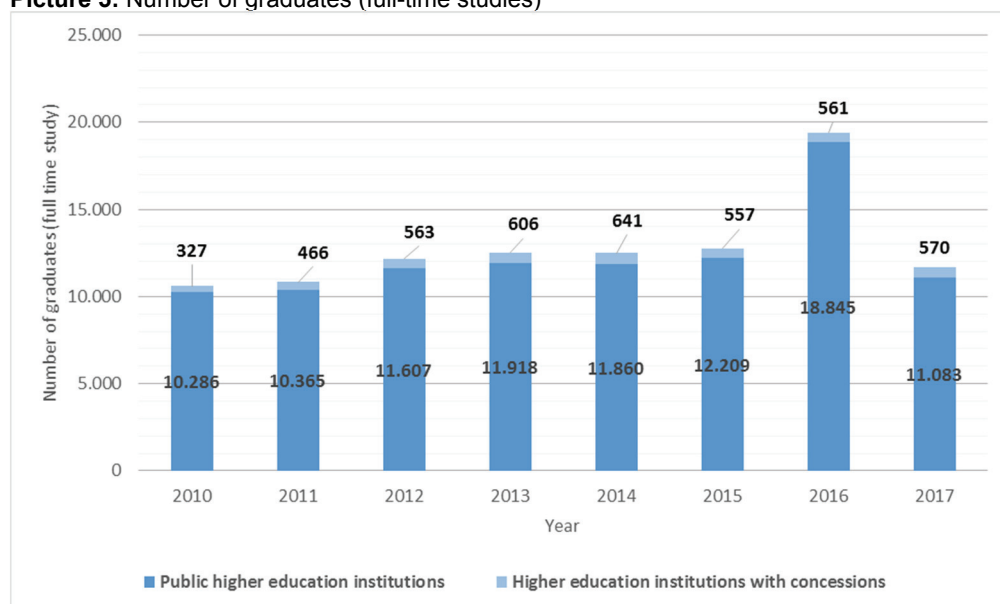


Source: Ministry of Education, Science and Sport, 2019.

## 5. NUMBER OF GRADUATES (FULL-TIME STUDY)

According to the European Commission, in Europe, within a complex, interconnected global economy, the need for highly educated individuals with specific high-tech knowledge is increasing, which according to the projections would mean an increase in the share of highly qualified employees from 29% in 2010 to 35% in 2020 (European Commission 2011, p. 30). Nevertheless, the economic crisis had a great impact on the employment of graduates.

**Picture 5:** Number of graduates (full-time studies)



Source: Ministry of Education, Science and Sport, 2019.

Since 2010, the numbers of full-time graduates were increasing. An anomaly appeared in 2016, when altogether 18.845 students enrolled in full-time studies graduated. This increase was a result of implementation of the Bologna structure implementation and year 2016 was the final year to finish pre-bologna study programmes. In this year 8.197 graduates have finished pre-bologna studies, 73 % among them finished university studies at public higher education institutions. In 2017 a decrease in graduate numbers was detected at public higher education institutions, while the number of graduates in private higher education institutions with concession reached 570 graduates.

## **6. CONCLUSION**

This analysis reveals that economic conditions in Slovenia are improving and the public funding is slowly increasing and providing a stable funding for higher education institutions. Public funding of study activities has finally reached the amount spend in the pre-crisis period and is slowly rising.

However, the decrease in student enrolments are another aspect that needs full attention. Student numbers (full-time studies) are dropping, mainly as a result of demographic decline in the most typical age group for enrolment. Financing mechanism is mainly linked to student numbers that is why the declining trend in student number will likely change the distribution of public funds among higher education providers. The trajectory of decreasing student numbers can also affect the operation of smaller higher education institutions, therefore they need to make more effort with marketing the study programmes to attract more students.

Number of graduates who finished full-time studies was slowly increasing in public as well as in private higher education institutions with concessions. The increase in 2016 resulted from the final implementation of the Bologna structure, where pre-bologna study programmes are no longer in place. Interestingly, numbers of graduates remained high in the period 2010-2016, while in 2017 a drop in the largest two public universities is detected.

The new funding allocation of public funds will, however, leave a mark in the future. The shift from no performance expectations to some competitive funding has emerged, focusing on quantitative indicators. Higher education institutions in Slovenia are now facing new challenges.

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