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*Private provision of teaching services:
Exploring trends and developments in
temporary teachers in the Netherlands*

*Prestación privada de servicios de enseñanza:
Explorando las tendencias y la evolución en el
profesorado interino en los Países Bajos*

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Abstract

The alleged increase of temporary teachers that are sourced by private employment agencies has generated a heated debate about its benefits and pitfalls. At the same time, little is known about the scope of the private teacher employment industry and the composition of the temporary teacher workforce. Using a large and representative labor survey administered by the Central Bureau of Statistics Netherlands, we provide context for the discussion and examine the scale and development of temporary teaching in the Netherlands. We furthermore depict characteristics of temporary teachers and their jobs. We find that the amount and share of temporary teachers in primary and secondary education more than doubled during the last decade. Moreover, we show that teachers who are relatively young, male and have a migration background are more likely to take up temporary teaching. Our study also shows that temporary teachers work less hours and, on average, earn less.

Keywords: Temporary teachers; Flexible contracts; Private sector; Education; the Netherlands

Resumen

El supuesto aumento del número de docentes temporales contratados por agencias de empleo privadas ha generado un acalorado debate. Al mismo tiempo, se sabe poco sobre el alcance del sector de empleo privado de docentes y de la composición del colectivo de docentes temporales. Utilizando una encuesta laboral amplia y representativa, proporcionamos el contexto para el debate y examinamos la escala y el desarrollo de la enseñanza temporal en los Países Bajos. Además, describimos las características de los docentes temporales y sus puestos de trabajo. Comprobamos que la cantidad y la proporción de docentes temporales en la enseñanza primaria y secundaria se ha duplicado con creces durante la última década. Además, mostramos que los docentes relativamente jóvenes, de sexo masculino y de origen inmigrante son más propensos a ejercer la docencia temporal. Nuestro estudio también muestra que los docentes temporales trabajan menos horas y, de media, ganan menos.

Palabras clave: Docentes interinos; Contratos flexibles; Sector privado; Educación; Países Bajos.

1. Introduction

In recent decades, involvement of the private sector in the provision of educational goods and services has reached unprecedented levels. As scholars have pointed out, private actors and organizations increasingly seem to have embraced the idea of education ‘as a sector for investment and profit making’ (Verger *et al.*, 2016, p.3). While the sales of goods and services to schools, as well as private educational provision (through private schools), is nothing new, more recently we are seeing that private sector participation has expanded across a wide range of levels and activities, some of which previously have been under government control (Verger *et al.*, 2022). The emergence of the Global Education Industry is characterized by the growth of an educational market in areas such as assessment services, teaching and learning resources, school improvement services, administration support, and edu-marketing (Verger *et al.*, 2022). Simultaneously, as Verger *et al.* (2016) point out, participation by the private sector in education is dynamic and has the potential to rapidly give rise to new markets in response to particular contexts.

Indeed, as Verger *et al.* (2022) argue in this special issue, in recent years, new forms of private sector involvement in education have emerged, while others have grown in prominence. In this paper, we show that one example of rising private sector involvement in education, which so far has received relatively little scholarly attention, consists of the private sector practice of providing teaching services to public education. By offering the service of taking responsibility for teacher recruitment processes, or at least by taking over some of the administrative duties and financial risks associated with hiring new employees, privatized employment agencies promise to save schools time and resources, while ensuring the ‘right fit’ is found. Privatized employment practices are an example of flexible work arrangements, which are becoming prevalent in many sectors and organizations. This practice involves a triangular relationship between the employee (the teacher), the organization where the employee works at (the school) and a third-party (the employment agency). Instead of signing an employment contract with the school where the teacher works, the teacher signs an employment contract with the agency, which becomes the formal employer. The agency also signs a service contract with the school, and the school then pays the agency for the teaching service provided by the temporary teacher. In some territories, the rapid increase in the number of teacher employment agencies signals the emergence of an employment agency industry, already worth millions annually. For example, in the case of the UK, a country which is facing significant teacher recruitment and retention challenges, it has been estimated that in 2018/2019 more than £425 million has been spent on sourcing temporary teachers from employment agencies (NASUWT, 2020).

As Verger *et al.* (2022) argue, the emergence and expansion of the Global Education Industry has generated a heated debate about the benefits and pitfalls of increased private sector participation in education. The alleged greater reliance by schools on temporary teachers sourced by private employment agencies is one of the focusses of this debate. On the one hand, privatized employment agencies often claim to contribute to the continuity of education by lessening ongoing teacher shortages. One proclaimed advantage for a school to work with an employment agency is that the agency is often able to quickly fill a vacancy for (temporary) work, which requires specific knowledge (Cörvers & Van Thor, 2010). Schools are thereby able to avoid slow and time-consuming recruitment

and selection processes. Moreover, schools can more easily let go of teachers when services are no longer needed, and employment risks tend to be low. Towards teachers, recruitment agencies often highlight the benefits of greater flexibility and increased pay, as well as the opportunity to work in different schools and classrooms. On the other hand, various scholars have pointed towards the cost inefficiencies of using agencies and the limited influence of employees on the conditions of their employment (Pollock, 2007). Furthermore, concerns have been raised about the effects of temporary teachers on education quality (Earnshaw *et al.*, 2002; Grimshaw *et al.*, 2003). The effect of teachers' quality on pupils' learning growth is large (see e.g. Nye *et al.* 2004). Temporary contracts may attract different types of teachers such that education quality is affected. Moreover, temporary teachers are sometimes perceived as less involved in the school (see e.g. De Wit, Stuivenberg & Van der Ploeg, 2014), with potential implications for the education that is provided and student learning.

While it is clear that greater reliance on temporary teaching can affect both school governance and education quality, a limited understanding prevails of the magnitude of current reliance on temporary teaching sourced by private employment agencies, as well as of the precise consequences hereof. This is in part due to limited (recent) scholarly attention to this form of private sector involvement. This lack of attention is noteworthy considering that different pieces of grey literature indicate the emergence of a significant employment industry in different contexts. As such, getting a better sense of the scale at which teachers are hired through privatized employment agencies, as well as their characteristics, forms an important first step towards understanding the impact of the employment industry on public education.

In an attempt to contribute to this, in this paper we examine the teacher employment industry in the context of the Netherlands. Due to the significant teacher shortage in the Dutch context, which is expected to increase in the near future (Adriaens *et al.*, 2021), schools increasingly appear forced to consider non-conventional ways of finding and hiring teachers so as to ensure the continuity of schooling. Media debates highlight how a rising number of schools have turned to employment agencies (Dujardin, 2017; Kuiper, 2018; Lange, 2018). In the wake of this, politicians as well as teacher organizations have expressed their concerns about this form of private sector involvement in education, in part because emerging evidence indicates that schools often pay significantly more for teachers that are hired through an employment agency (e.g. De Wit *et al.*, 2014). Moreover, according to the teacher union 'Teachers in Action', the strategies used by privatized employment agencies to attract teachers might make it increasingly difficult for schools to directly hire teachers. The association for secondary schools in the Netherlands has referred to this form of private sector involvement in education as an example of the commercialization of teacher shortages (VO-raad, 2017).

In response to the call of Verger *et al.* (2022) for more in-depth analyses of specific segments of the Global Education Industry, in this paper we examine the development - in frequency and shares - of temporary teaching contracts sourced by private employment agencies in primary and secondary education in the Netherlands. We furthermore depict characteristics of temporary teachers that hold such contracts and how they compare to the characteristics of teachers with regular labor contracts. Finally, we depict the job characteristics of teachers with temporary contracts negotiated with privatized employment agencies.

In the case of the Netherlands, different previous studies have attempted to map the scale at which teachers are hired and sourced through privatized employment agencies. For example, by relying on a survey administered to school boards, De Wit, Stuivenberg and Van der Ploeg (2014) showed that in 2014 the majority of all sampled school boards in the Netherlands had hired teachers through an employment agency. In a more recent report administered by the government (OCW, 2021), figures based on a sample of school annual reports show an increase in school expenditure on temporary work. However, here it is unclear whether this is due to increased costs or an increase in the number of temporary teachers. Our study contributes by depicting the recent development in temporary teachers in the Netherlands. We use a large and representative labor survey which is administered by the Central Bureau of Statistics Netherlands and follows approximately 111.000 individuals each quarter as of 2003. We can therefore estimate the frequency and share of temporary teachers in the Netherlands up to 2021 and do not suffer from potential nonrandom sampling. Moreover, we show characteristics of temporary teachers and their jobs which gives a first insight into what type of teachers take on temporary contracts and what their working conditions are.

The paper is structured as follows. We start by elaborating on the different forms of temporary teaching contracts that exist in the Netherlands. This section is followed by a review of existing research on the scope and impact of temporary contracts in education. Subsequently, we describe the data and methodology and present the study's findings. We finish the paper with a concluding discussion in which we also highlight a number of promising lines of future inquiry.

2. Flexible working arrangements in the Dutch context

A number of differences exist in the type of contracts that regular/permanent teachers hold compared to temporary teachers, including those that are hired through privatized employment agencies. Following de Wit *et al.* (2014), in this study, we make a distinction between fixed and flexible contract types. With fixed contracts, we mean indefinite contracts, as well as fixed-term contracts, with the prospect of conversion into an indefinite contract. In both of these cases, the contract is signed between the employee and the organization where the employee works. In addition to fixed contracts, different forms of flexible contracts exist. As portrayed in Table 1, in this study, we distinguish the following flexible contracts¹: (a) fixed-term contracts with no prospect of conversion into an indefinite contract; (b) internship/training contracts; (c) self-employment constructions; (d) temporary employment contracts; (e) payroll; and (f) secondment contracts. One important distinction between these different forms of flexible contracts relates to the basis of the contract. An employee can have a contract with the organization (i.e. the school) where she works, or a contract with a third party, such as an employment agency. In case of the first two contracts, the contract is signed between the employee and the organization where the employee works. In these cases, the organization where the employee works bears responsibility for the employee under employment law and carries out the financial administration. Self-employed workers and freelancers arrange

¹ This classification is based on the most common flexible contracts that are used in the education sector as identified and defined by de Wit *et al.* (2014).

these matters themselves, as they are not employed anywhere. Finally, in the case of temporary employment contracts, payroll or secondment contracts, employees are not employed by the organization they work at, but rather by an external agency. It is the agency, rather than the organization where the employee works, that bears employment law obligations and that arranges the financial administration. It is these latter three types of contracts that we are particularly interested in in this paper, as they involve privatized employment agencies.

Table 1.
Overview of different types of flexible contracts

Type of contract	Definition
Fixed-term contract with no prospect of conversion into an indefinite contract	A contract for a definite period of time, whereby no agreements have been made about the conversion of the contract into a permanent employment contract.
Internship/training contracts	A contract for a definite period of time, generally for the duration of the internship/training. The contract is based on a triangular relationship between the student, the educational institution where the student is enrolled, and the organization where the student will conduct the internship/training.
Self-employment constructions	A self-employed worker works for herself, does not employ any staff, works at her own risk, is an independent contractor and is focused on making a profit.
Temporary employment contract with temporary agency	A contract based on a triangular relationship between the employee, the temporary employment agency and the organization where the employee works (the hiring organization). The employee is employed by the temporary employment agency and then hired out to perform work under direction and supervision of the hiring organization. The temporary employment agency is responsible for recruitment, selection and administrative matters.
Payroll	A contract based on a triangular relationship between the employee, the payroll organization, and the organization where the payroll employee works (the hiring organization). The employee is employed by the payroll organization but works at the hiring organization. While the payroll organization is responsible for administrative matters and bears the financial risks, the organization at which the employee works is responsible for recruitment, selection and supervision of the employee. Payrolling usually involves a long-term relationship between employee and employer (in contrast to temporary employment).
Secondment contracts	A contract based on a triangular relationship with the employee, the secondment agency and the organization where the employee works (the hiring organization). The employee is formally employed by the secondment agency. Secondment contracts are largely comparable to temporary employment contracts, but are more often used for temporary work that requires specific knowledge.

A number of developments are likely to influence trends in the usage of flexible contracts in the context of the Netherlands. As for example shown by de Wit *et al.* (2014), school boards that anticipated a (significant) decline in the number of students in their

area tended to hesitate with employing new teachers on a permanent basis. In both primary and secondary education, the number of students has been declining over the past years, a trend which is expected to continue in the near future. However, this trend does not affect all regions and areas equally (DUO, 2021).

Changes to legislation and regulations can also play an important role in reliance on flexible contracts. As of 2015, legal changes were introduced in an attempt to improve the position of workers with flexible contracts (often referred to as flex workers). As of 2020, new changes were introduced surrounding employment contracts and dismissal practices. For example, by lowering unemployment insurance premiums for employees with a permanent contract, it has become more attractive for employers to offer permanent contracts. Since 2020, employers have been paying lower unemployment insurance premiums for employees with a permanent contract than for employees with a flexible contract. At the same time, payroll employees now enjoy the same legal status and employment conditions as employees that are directly employed by the organization they work for. As of 2021, payroll employees are also entitled to a good pension scheme.

3. Literature review: temporary teachers and employment agencies in education

When reviewing the academic literature, it becomes clear little (recent) attention has been paid to temporary teachers sourced by privatized employment agencies. One body of literature has looked at the growth of an international recruitment industry, which relates to the emergence of teacher recruitment companies that ‘match teachers who wish to work abroad with schools and districts facing teacher shortages’ (Caravatti, 2015, p.445; see also Bartlett, 2014). This body of literature has highlighted how unregulated international recruitment contributes to “just in time” hiring, as well as the casualization of the teaching workforce. Concerns have been raised about the impact on the teaching profession and the quality of public education (Bartlett, 2014; Caravatti, 2015).

Moreover, in the context of the UK, the role of private sector agencies in the provision of temporary teachers has received some scholarly attention (e.g. see Grimshaw, Earnshaw and Hebson, 2003; Pollock, 2007). Most research has been conducted following the turn of the millennium, which might relate to the significant increase in private sector involvement in supply teaching at that time and increased reliance of schools on temporary teachers (DfEE, 2001). In 1998-99, the supply of teaching ‘made up the greatest proportion of single private sector involvement in publicly funded education with an estimated budgeted value of £210 million’ in the UK (IPPR, 2001, p.12). The conducted studies highlight a number of concerns surrounding this private sector practice, including in relation to the potential conflict between private businesses’ focus on maximizing revenues and public sector concerns with ensuring equity and quality of teaching provision (Grimshaw *et al.*, 2003). Moreover, questions have been raised about the quality of temporary teachers, as well as about their lower status compared to permanently employed teachers. In addition, it has been pointed out that increased reliance on hiring temporary teachers to provide teaching services ‘potentially conflicts with longstanding notions of what constitutes professional duties and obligations among teachers’ (Grimshaw *et al.*, 2003, p.267). Regardless of this body of research, many questions about the scope and impact of private sector involvement in providing teaching services remain unanswered, while more recent research into this phenomenon in the UK context remains scarce.

As mentioned in the introduction, also in the context of the Netherlands, a few studies have looked into the private sector practice of providing teaching services. By relying on a survey administered among a sample of school boards, de Wit *et al.* (2014) estimated that approximately 6 percent of all teachers in primary and secondary education had a flexible contract, while about 3 percent of all teachers were employed on the basis of a temporary work contract, a secondment contract, payroll, or were self-employed workers. It appeared from their study that around half of all primary education school boards in the Netherlands employed staff using a secondment contract or payrolling, while about 20 percent of all school boards made use of temporary employment contracts. In secondary education, the majority of the school boards indicated to make use of secondment contracts (77%), temporary employment contracts (65%) and payrolling (50%). The study conducted by de Wit *et al.* (2014) also provided insights into the motives of school boards to rely on flexible contract forms, including external flexible contracts that are signed with employment agencies. The authors showed that in both primary and secondary education, the main motives of school boards to use flexible contracts were temporary replacement, temporary work, the prevention of employment law risks and uncertainty about the continuation of financing from the government or other sources. The majority of the surveyed school boards indicated that they anticipated increased reliance on flexible contracts in the coming two years. This despite the fact that many of them mentioned preferring permanent employees, in part because permanent staff was perceived as more involved in the school they work at, as well as due to the administrative burdens of external flexibility. De Wit *et al.* (2014) showed that financial reasons are often behind increased usage of flexible contracts. The boards mentioned that the cost of hiring someone permanently, or the risk associated with doing so, was sometimes perceived as too high². Simultaneously, limited opportunities were perceived to directly hire someone only temporarily (multiple times). In some cases, it appeared external flexible contracts posed less of a risk for boards (de Wit *et al.*, 2014).

The few studies that have been conducted in the different contexts on flexible work arrangements and employment agencies provide some indications that differences might exist in teacher characteristics, when comparing teachers who work as temporary teachers for employment agencies and regular teachers who are permanently employed in schools. For example, Pollock (2007) highlighted that inequitable access to the teaching profession implies women, in particular from marginalized groups, might encounter barriers to gain access to a permanent teaching position. Others have highlighted how employment agencies might have specifically targeted women, as well as recently graduated teachers (Grimshaw *et al.*, 2003). Moreover, a study by Earnshaw *et al.* (2002) showed that British teachers confronted with issues related to their performance sometimes chose to resign and take on temporary teaching for an employment agency. Also in the Dutch context, it has been highlighted that recent graduates are more likely to be employed on the basis of a flexible contract, in both primary and secondary education. However, teaching staff for vacancies that are difficult to fill are more likely to be employed on the basis of a permanent contract (De Wit *et al.*, 2014).

² When hiring someone permanently, boards become self-insurers for unemployment benefits and have to pay extra statutory unemployment benefits. Moreover, in particular due to anticipated shrinkage in student numbers in certain areas, boards perceive the risk too high to hire someone permanently, who in a short time might become redundant (De Wit *et al.*, 2014).

4. Data and methodology

4.1. Data

In this study, we use two data sources to depict the development and characteristics of temporary teachers and their jobs: EBB and SPOLISBUS.

4.1.1. Survey data - EBB

The EBB contains data that is collected from a nationally representative labor survey (EBB) that is administered by the Central Bureau for Statistics (CBS) in the Netherlands. As of 2003, the EBB collects data from 110.000 individuals on a quarterly basis. Individuals enter the datapool during five consecutive quarters such that it is a rotating panel dataset. During each quarter, individuals answer questions about their main job - i.e. the job for which they spent most hours during the month of the interview.

First, individuals indicate their job title. From this information we can derive whether an individual works as a teacher in primary or secondary education. Primary education teachers are defined as kindergarten teachers, primary school teachers and primary special education teachers. In the survey, information is available from 2006 to 2021. Secondary school teachers include high school teachers and vocational school teachers with information available from 2013 to 2021.

Second, individuals are asked under what type of employment contract they perform their job. Here, we can assess whether individuals are contracted by a temporary work agency or have another type of contract. By combining information about job title and contract type, we can identify temporary workers in primary and secondary education. All teachers with other contract types - such as permanent working contracts negotiated with the school - are labeled as “regular” teachers. Notice, however, that this categorization of temporary teachers may be incomplete as the contract type indicator only focuses on one type of flexible contracts: temporary work agencies. Other types - i.e. payroll-ing and secondment - are not explicitly included. It is therefore up to the interpretation of the survey respondent whether they indicate they work under a temporary contract when they work under other types of flexible contracts. Given this potentially incomplete status of working under a flexible contract, we define this first indicator as the *narrow* indicator of temporary teacher status.

In addition to information about job title and contract type, the EBB contains information about teacher characteristics. First, we categorize an individual’s age in four categories: less than 36 years old, between 36 and 45 years old, between 46 and 55 years old and above 55 years old. Second, we include an individual’s gender. Third, a variable indicates the highest education level for which a teacher obtained a diploma: vocational training, applied sciences or university. Finally, a teacher’s migration background is categorized: no migration background, non-western migration background or western migration background. Being classified as having a migration background indicates that either the individual herself has migrated or her parents. This information comes from municipality-level registration data at the CBS.

4.1.2. Registration data - SPOLISBUS

In addition to survey data, we use income data that is registered by the Insurance Employee Agency (UWV). This dataset - called SPOLISBUS - contains income information about *all* individuals with an employment contract in the Netherlands. As of 2006, job information is collected on a monthly basis. The registration data is used for two purposes.

First, it allows us to distinguish a broader category of temporary teachers. As mentioned above, the categorization based on the survey alone may be limited as it only asks about temporary employment agencies. In the registration data, it is verified whether people work in sectors that provide other flexible contracting services - such as payroll-ing - besides the temporary employment agencies in the survey.³ Now, we can define a second, broader category of temporary teachers that contains *both* individuals that state they work for a temporary work agency *and* teachers whose employment record states that they work for a flexible contracting company in their main job. We define this as the *broad* indicator of temporary teacher status.⁴

Second, the registration data contains detailed information about job characteristics. In particular, we can identify the main job in the employment records that coincides with the main job from the survey records - i.e. we can find the job that contains in which an individual worked most hours in the month of the interview. Subsequently, for this job we can estimate the hourly wage and the full-time equivalent (fte).

4.2. Methodology

By combining the different data sources and retrieving the above mentioned information, we show the development of temporary teachers in the Netherlands - both in frequency and share. Moreover, the characteristics of temporary teachers and their job characteristics can be shown and compared to those of regular teachers. It is important to note that we only show statistics for teachers' *main* jobs - i.e. the job for which they work most hours. Temporary teachers who have a second, larger non-temporary job are not included as temporary teachers. Hence, we likely *underestimate* the true amount of temporary teachers.

Since the information is derived from surveys - and we do not observe the complete population of temporary teachers in the Netherlands - we use sampling weights to estimate the frequency distributions at the population level. The CBS designs and estimates these weights based on multiple variables, such as background characteristics, employee insurance and information. As such, less (more) frequently observed individuals gain more (less) weight in the estimation of the frequency distribution. Nevertheless, it is important to notice that we depict estimates of population frequencies and shares and not the true values.

3 Unfortunately, this data does not state what the job is of the individual and in what field or sector the individual does temporary work.

4 The broad indicator now also includes individuals who state their main job is teaching and whose registration data state their main employer is a payrolling, secondment or temporary working agency. For teachers with two jobs, there is a small risk that the main job in the survey - namely, teaching - does not match with the main job in the registration data - namely, temporary work. The consequence is that this indicator can include teachers with regular contracts who have a second temporary job in some other sector. We deem this risk low as only 6 percent of teachers have two jobs and the likelihood of a mismatch between main jobs is small.

Finally, as we rely on survey data, we require sufficient observations to convincingly detect a signal in the data. For the development of the amount of temporary teachers, we therefore also consider the weighted average and for each time point and take the average of the frequency of the current, previous and next year. With respect to the teacher and job characteristics, we consider all teachers from 2015 onwards. As such, the uncertainty of the category frequencies is sufficiently low.⁵

5. Findings

5.1. Trends in frequency and shares of temporary teachers

Figure 1 depicts the development of the amount and share of temporary teachers in primary education. In both panels, the dotted lines depict the frequency and shares of temporary teachers according to the narrow and broad definition, respectively. In order to show a less erratic trend which is based on more observations, we focus on the solid lines that depict the weighted averages as described above. Both the frequency and share of temporary workers in primary education has increased over the period of 2006 to 2021. Depending on the definition, in recent years, between approximately 1,250 and 3,000 teachers have been working under a flexible contract as their main job. The accompanying shares are between 0.75% and 2% of all teachers in primary education. The year-to-year data show a minimum in 2020 that is potentially related to the school lockdowns during the pandemic.

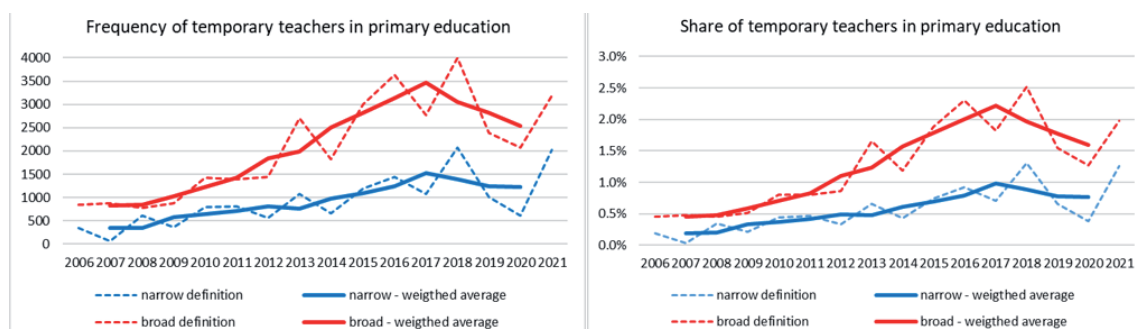


Figure 1. The frequency and share of temporary teachers in primary education over time

Figure 2 shows the trends in frequencies and shares for temporary teachers in secondary education. The narrowly defined temporary teachers grow in both frequency and share from 2013 to 2021. Frequencies rise from approximately 1,000 to 1,500 and shares from 0.75% to 1.25%. The broad definition shows an initial increase and later decrease in the development with a peak in temporary workers around 2018, both in frequency and share. Again, the year-by-year frequencies show a drop during 2020.

5 See <https://www.cbs.nl/nl-nl/deelnemers-enquetes/personen/overzicht/enquete-beroepsbevolking> for more details.

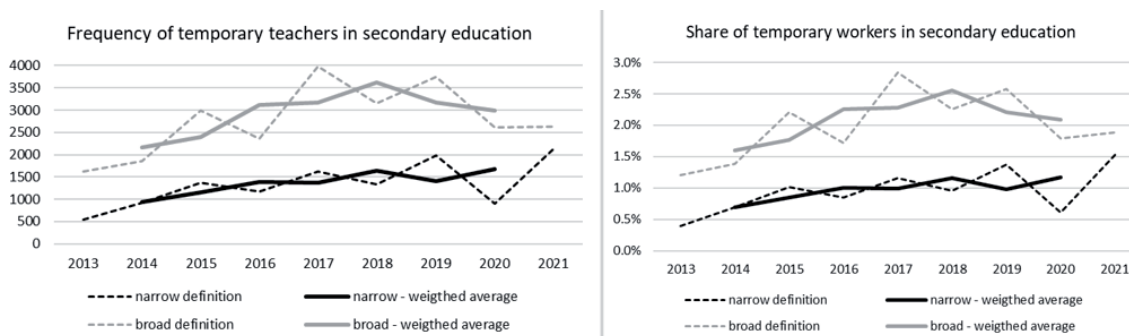


Figure 2. The frequency and share of temporary teachers in secondary education over time

5.2. Characteristics of temporary and regular teachers

Next we consider what type of teachers are employed under temporary contracts and compare their characteristics to that of regular teachers. We focus on the narrow definition of temporary teachers - i.e. a temporary teacher is defined as such if she or he indicates being a teacher and working with a temporary contract in the EBB labor survey.⁶ To gain sufficient statistical certainty, we pool all observations from 2015 onwards. This results in 8,253 and 9,136 weighted temporary teachers in primary and secondary teachers, respectively. In total, 838,650 and 938,579 weighted regular teachers are included. Two-sided proportion and mean tests show whether characteristics between temporary and regular teachers are statistically different.⁷

Figure 3 shows that in primary and secondary education respectively 74 and 43 percent of the temporary teachers are women. In comparison to teachers with regular contracts, this share is low and significantly different. We observe that there are relatively more men than women working under temporary contracts.

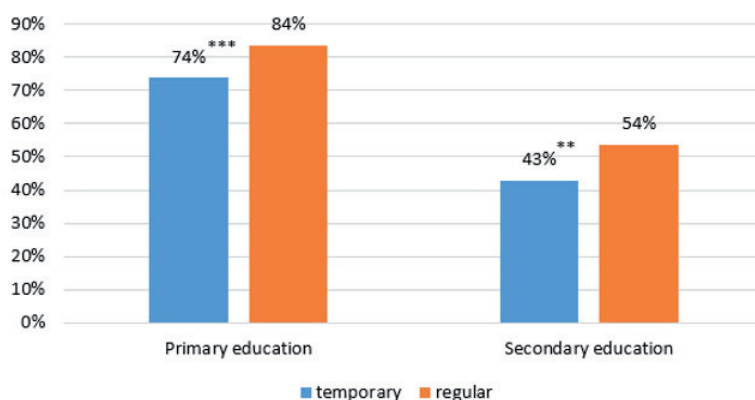


Figure 3. Gender of teachers in primary and secondary education

Note: $p < 0.1$ *; $p < 0.05$ **; $p < 0.01$ ***

6 As explained above, the broad definition potentially contains measurement error in the sense that it might contain regular teachers that also do non-teaching temporary work next to their main teaching job. Reassuringly, however, teacher and job characteristics are similar for both the narrow and broad definition of temporary teacher status. Results available upon request.

7 Sampling weights, which are provided by the CBS, are treated as given and hence statistical testing does not account for the uncertainty that is generated by the sampling weights.

Figure 4 shows the age distributions of teachers in primary and secondary education. The left panel shows that 60 percent of the temporary teachers in primary education are 35 years old or less. The remaining 40 percent is roughly equally distributed over the remaining age categories. The age distribution differs from that of regular teachers. In particular, the share of young teachers with temporary work is 24 percentage points larger than for regular teachers. Only for the age group 46-55 we see that shares are approximately equal and not statistically different from zero.

For secondary education - in the right panel of Figure 4 - most of the temporary teachers (46 percent) are less than 36 years old. Older temporary teachers are roughly equally distributed over the remaining age categories. In comparison to regular teachers, temporary teachers are often younger. In particular, only 33 percent of regular teachers in secondary education are 35 years or younger. In the remaining age categories, the share of regular workers is always larger.

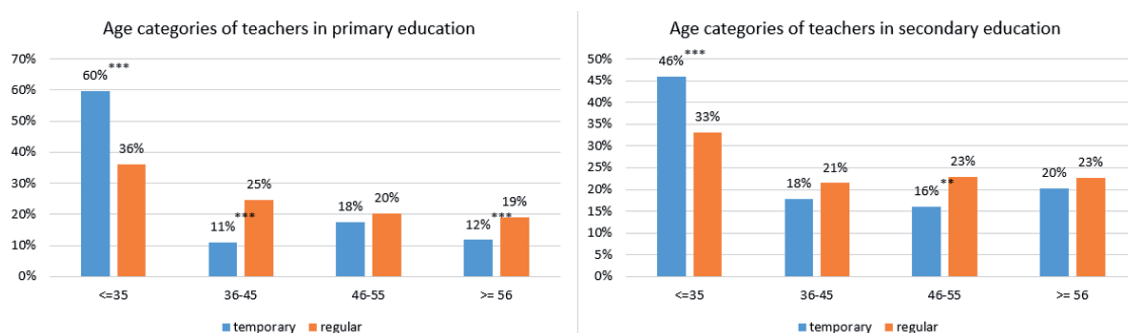


Figure 4. Age of teachers

Note: $p < 0.1$ *; $p < 0.05$ **; $p < 0.01$ ***

The left panel of Figure 5 depicts the distribution of education levels for teachers in primary and secondary education. For primary education, almost 70 percent of the temporary teachers have an applied science degree. Approximately 10 and 20 percent of the temporary teachers have a vocational or university degree, respectively. These percentages do not differ in comparison to regular teachers and are not statistically different.

For temporary teachers in secondary education, as shown in the right panel, more than half of the temporary teachers have an applied sciences degree. Almost 30 percent have a vocational degree and less than 20 percent have a university degree. In comparison to regular teachers in secondary education, we find that temporary teachers more (less) often have a vocational (university) degree. These differences are statistically significant.

The right panel of Figure 5 shows information about the migration background of teachers. 75 percent of the temporary teachers in primary education have no migration background. Respectively 23 and 1 percent have a non-western or western migration background. This differs in comparison to regular teachers. Especially the share of teachers with a non-western migration background is high for temporary teachers in comparison to regular teachers. For secondary teachers, we find that approximately 25 percent of temporary teachers have a non-western migration background and 8 percent have a western migration background. Again, the share of temporary teachers with a non-western migration background is high in comparison to their regular counterparts. For both primary and secondary teachers, we find statistically significant differences in the migration background distribution.

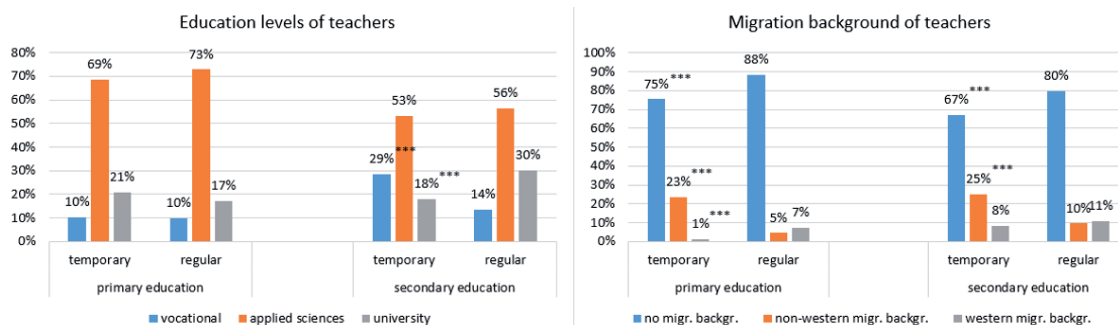


Figure 5. Education level and migration background of teachers
 Note: $p < 0.1$ *; $p < 0.05$ **; $p < 0.01$ ***

In sum, we find that temporary teachers have different characteristics than regular teachers in both primary and secondary education. Temporary teachers are more often men, young and have a non-western migration background. In secondary education, their education level also differs with a relatively high share of temporary teachers with a vocational degree.

5.3. Characteristics of temporary teacher jobs

Figure 6 depicts two job characteristics of teaching jobs: fte and hourly wages. Again, we only focus on the narrow definition of temporary work status which is based solely on the EBB labor survey. The left panel of Figure 6 shows that temporary teachers have an average fte of 0.63 and 0.64 in both primary and secondary education. This is lower in comparison to regular teachers who work 0.73 fte in primary education and 0.78 in secondary education. Temporary teachers work less hours and this difference is statistically different at the 1% significance level.

The right panel of Figure 6 shows the average hourly wages of teachers in primary and secondary education. On average, temporary teachers earn around €17.70 in primary education and €20.20 in secondary education. In both instances, temporary teachers have a statistically significant lower average hourly wage in comparison to regular teachers. As temporary teachers have different background characteristics, this may not be very surprising, however. Temporary teachers are often younger, such that their hourly wage is expected to be lower. To control for these background characteristics, we estimate a linear regression model where hourly wage is regressed on temporary work status, gender, age, education level and migration background. For primary education, we see that the difference in averages in hourly wages between regular and temporary work status decreases from €3.62 to €2.58. In the case of secondary education, the hourly wage gap shrinks from €4.76 to €2.99. What drives this wage gap is left to be discovered. One obvious factor that probably drives the difference is (unobserved) teaching experience.

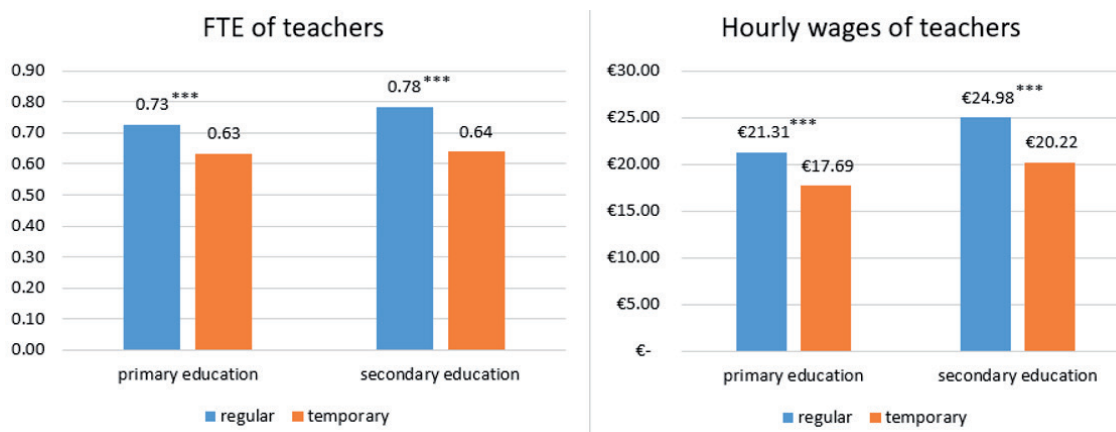


Figure 6. Average fte and hourly wages of teachers

Note: $p < 0.1$ *; $p < 0.05$ **; $p < 0.01$ ***

6. Concluding discussion

The first aim of this paper has been to get a sense of the scale and development of temporary teaching sourced by privatized employment agencies in primary and secondary education in the Netherlands. Our findings show that in both education sectors, there is an increase in the weighted average of the number and share of temporary teachers until 2019. From 2019 onwards, the weighted average of the amount and share of temporary teachers decreases. This highlights how, as in other countries characterized by significant teacher recruitment and retention challenges, sourcing temporary teachers through privatized employment agencies forms one way in which the private sector penetrates public education in the Netherlands. Thereby, we complement findings by Caravatti (2015) and Bartlett (2014), who document the growth of international teacher recruitment companies, and corroborate findings by the findings of De Wit *et al.* (2014), who show that in 2014 about 3 percent of all teachers works under a temporary work contract, a secondment contract, payroll contract or self-employment in the Netherlands.

We can only speculate about the forces that drive the initial increase and subsequent decrease in temporary teachers in the Netherlands. Verger, Fontdevila and Moshetti (2022) argue that a range of different factors could lie behind developments in the prominence of private sector participation in education, including economic and political factors, as well as broader educational trends. In the case of the Netherlands, the increase in temporary teachers could, on the one hand, be attributed to i) the rising teacher shortage, ii) earlier labor market legislation making it easy to provide teachers with temporary contracts, and iii) potential uncertainty for school boards about future finances and the risk of hiring teachers on a permanent basis when, due to anticipated shrinkage in student numbers in certain areas, newly hired teachers might become redundant in the (near) future. On the other hand, the recent decline may be impacted by the COVID-19 school lockdowns during which less teachers were in demand due to home teaching. This highlights how, while many segments of the Global Education Industry grew in prominence during the COVID-19 pandemic (Verger, Fontdevila & Moschetti, 2022; Williamson & Hogan, 2020), private provision of teaching services might have

declined, at least in some contexts. Nonetheless, more recent labor market reform, which has made it less attractive for employers to provide temporary contracts to employees in the Netherlands, could also play a role here. More research is needed to gauge the impact of these different forces. Moreover, the upcoming years will show whether temporary teaching continues to rise further.

Simultaneously, the current level and potential future rise in temporary teaching in primary and secondary education, calls for further questioning of the consequences of temporary teaching for the quality of education. Previous literature highlights that 'there is evidence to suggest that permanent teachers do not always react positively to their [temporary] teacher colleagues...if this is so, the impact on the children caught in the middle is potentially significant' (Cornwall, 2004, p.18). Moreover, as highlighted by de Wit *et al.* (2014), school boards mentioned to prefer permanent employees, as they were perceived as more involved in the school they worked at. It might indeed be that temporary teachers lack institutional knowledge, which they acquire after working in the same school community for a long time, and they might not feel as motivated to embed themselves when they know they will soon leave again. More research is needed to understand the impact of (increased) reliance on temporary teachers on educational processes and outcomes (including in relation to student learning).

In addition to general influences of adding temporary teachers to the teacher staff, this study shows that temporary teaching contracts attract teachers that differ from those with regular contracts. In particular, teachers who are relatively young, male and have a migration background are more likely to take up temporary teaching in the Netherlands. The finding that differences exist in teacher characteristics between teachers who work as temporary teachers for employment agencies and regular teachers who are permanently employed in schools aligns to previous research (Earnshaw *et al.*, 2002; Pollock, 2007; de Wit *et al.*, 2014). Nonetheless, our findings highlight that in the Netherlands, males are more likely to take up temporary teaching, whereas in other contexts, such as the UK, females appear more likely to do so. According to Pollock (2007), this highlights inequitable access to the teaching profession, which affects women from marginalized groups in particular. The significant number of teacher vacancies in the Netherlands, begs the question whether some (male) temporary teachers in the Netherlands might prefer to work on a temporary contract, instead of a permanent contract. Moreover, considering that it is by now clear that the quality of student learning depends strongly on the quality of the teacher (see e.g. Nye *et al.* 2004; Chetty *et al.* 2014a, 2014b; Hanushek and Rivkin 2006), an important question is how the potential self-selection of the temporary teacher "type" affects teacher quality. Future research may address the abilities and preferences of temporary teachers and why they are motivated to take up temporary teaching as their main job. In addition, as it appears that the characteristics of the temporary teacher bring greater diversity into the teacher population as a whole, an interesting question is whether such greater diversity benefits education quality.

We furthermore show that, not only do temporary teachers employed by private employment agencies have different characteristics than their counterparts with regular contracts, their working conditions differ as well. That is, our findings highlight that temporary teachers work less hours and, on average, earn less (while keeping age, gender, education level and migration background fixed). Studying how these different working conditions come about yields important policy implications. The differences in working conditions again indicate that there might be a group of teachers who are *not* willing to

work under regular contracts, but *are* willing to work under temporary contracts. Gaining a greater insight into the exact responsibilities of temporary teachers and working conditions (e.g. wages, employee rights) offers insights into the tradeoffs teachers make and what the whole spectrum of teacher supply looks like. Then, understanding why teachers with certain preferences select temporary contracts can inform policy about how to potentially attract more teachers and increase teacher supply. However, other reasons for the observed differences in working conditions may exist as well. For example, as shown by Earnshaw *et al.* (2002), a number of teachers in the UK that were confronted with issues related to their performance chose to resign and take on temporary teaching for an employment agency. Here, low-quality teachers may have no other job opportunities and therefore sort into teaching jobs with low pay and greater uncertainty.

Our study contributes to the academic literature by providing an in-depth analysis of a segment of the Global Education Industry which so far has received relatively little scholarly attention. Similar and more research is also needed in other countries that see the emergence and growth of an employment agency industry. Then, as a result, comparative analyses can look at how and why this form of private sector involvement in education manifests itself in different regions of the world. In addition, comparative analyses might enable us to draw conclusions about the impact of privatized teacher recruitment on education quality and equity, as well as its effect on teacher shortages. For now, it remains an empirical question whether increased reliance on temporary teachers lessens or exacerbates ongoing teacher shortage crises. On the one hand, temporary teaching contracts may attract teachers who would otherwise not be willing to teach. In light of current teacher shortages, this is a clear advantage. On the other hand, previous research has highlighted that privatized employment agencies sometimes charge significant fees, thereby contributing to a rise in school expenditures which can subsequently not be spent on hiring additional teachers, even when this might be necessary.

To conclude, by relying on two sources of secondary data, we have provided a better sense of the scale and development of temporary teaching sourced by privatized employment agencies in the Netherlands. Mapping the magnitude of this phenomenon forms a first step towards understanding the impact of the employment industry on public education. (Increased) reliance on temporary contracts can potentially offer opportunities as well as pose dangers for teachers, schools and education systems as a whole. As such, we emphasize the need for future research to look at this form of private sector involvement from a broad perspective, and to go beyond an evaluation of the capacity of private agencies to meet demand.

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