Temporary Positions for Principal Investigators: A DFG Funding Instrument in the Mirror of Statistics

Doctorate, highly qualified and eager to do research — but not yet permanently employed at a research institution: the typical applicant profile for Temporary Positions for Principal Investigators. This DFG funding instrument targets early-career researchers, returnees from industry or from abroad, but also researchers wanting to re-enter the German research system after a family leave. This Infobrief provides some statistics on Temporary Positions for Principal Investigators, highlighting the statistical profile of the scientists and researchers who take advantage of this grant programme. Special attention is paid to the sex and age distribution of the recipients.

1 DFG Funding Instrument “Temporary Positions for Principal Investigators”

Temporary Positions for Principal Investigators enable researchers to raise funds for their own employment for the entire duration of a research project, allowing them to carry out this project on their own responsibility and at a research institution of their own choosing.

The DFG has offered Temporary Positions for Principal Investigators since 2001. This funding module is mostly used for individual grants but can also be submitted in the context of Research Units and Priority Programmes.

The Temporary Position was originally designed exclusively to support individual researchers in the early stages of their careers. In October 2007, the Joint Committee of the DFG passed a far-reaching reform: It repealed the limitation – geared at promoting early-career researchers – that a Temporary Position could be requested only up to six years after the award of a doctorate. Since then, this funding instrument has been available to enable doctorate holders of all qualification levels to carry out their research projects; it is thus no longer exclusively an instrument to promote early-career researchers.

Based on the data collected by the DFG Head Office in processing grant proposals, this Infobrief provides compact information on some of the statistical features of this funding instrument. To permit identification of any structural changes caused by the programme

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1 More information on Temporary Positions for Principal Investigators can be found at http://www.dfg.de/formulare/52_02/52_02_en.pdf

2 Of 1,409 first-time proposals for Temporary Positions approved from 2005 to 2010, two percent went to Research Units and seven percent to Priority Programmes.
modification in 2007, temporally aggregated analyses have been broken down into two three-year periods (2005 – 2007 and 2008 – 2010).

Before we examine in Section 3 the statistical profile of researchers who take advantage of Temporary Positions, we take a look at the general funding statistics of this instrument. Figure 1 shows the number of first-time proposals for Temporary Positions submitted and approved each year from 2005 to 2010. The right axis shows the development of the funding rate.

It turns out that after the modification of 2007, the number of requested Temporary Positions increased significantly from 495 in 2007 to 710 in 2008. This trend continues through 2010, with a growth rate of 16 percent between 2008 and 2009, and 11 percent between 2009 and 2010.

The funding rate for Temporary Positions – i.e. the ratio of the number of approved proposals to the number of proposal decisions – remains within a relatively narrow range of 33 to 39 percent between 2005 and 2010. Despite the strong increase in proposal submissions following the modification of the Temporary Positions Programme in 2007, the funding rate fell by only two percentage points from 35 percent (2007) to 33 percent (2008). In 2009, the funding rate reached its highest level so far at 39 percent. Nevertheless, it should be noted that the funding rate for Temporary Positions is about 9 percentage points below the funding rate for individual proposals in the Individual Grants Programme.

3 Statistical Profile of Funding Recipients

3.1 Distribution by Scientific Discipline

A breakdown by scientific discipline shows that post-2007 the largest number of Temporary Positions for Principal Investigators has gone to the humanities and social sciences (cf. Figure 2).

This is also the scientific discipline most affected by the 2007 programme changes.
In 2009 more than twice as many first-time proposals were approved in the humanities and social sciences as were in 2007. A similar development can be observed in the engineering sciences. In the other scientific disciplines, the increases have been more moderate.

In 2010 the number of granted Temporary Positions stabilised compared to 2009. The previously reported rate of increase of 11 percentage points from 2009 to 2010 in proposal submissions for Temporary Positions is not reflected on the approval side, due to higher rejection rates overall.

### 3.2 Distribution by Age and Sex

A key feature of the modification of the Temporary Positions Programme in 2007 was the repeal of the six-year post-doctorate time limit for applicants. Since then, even researchers in the advanced stages of their careers have been able to apply for Temporary Positions to carry out their research projects. For this reason, a structural shift in the age distribution of applicants was to be expected after 2007.

A glance at Figure 3 confirms this conjecture: In 2008 the DFG received over 70 percent more proposals from researchers aged 36 to 45, most of whom had likely completed their doctorates more than six years prior to proposal submission and would not have been eligible to apply under pre-2008 rules. In the 46-to-55 age group, the absolute number of proposals quadrupled from 13 (2007) to 54 (2008). In 2010, as many as 104 individuals in this cohort applied for a Temporary Position.

In spite of an increase in proposals from older researchers since 2008, the average applicant age changed little over the years; as measured by the median, it actually declined. Both in the period 2005 to 2007 and from 2008 to 2010, applicants were 40 years old on average (median 2005 to 2007: 40 years; median

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3 The median (middle value) is the boundary between the two halves of a distribution. Compared to the arithmetic mean, the median is less sensitive to outliers.
2008 to 2010: 39 years). Thus the increased demand from older researchers in the aftermath of the programme modification was statistically neutralised by an even stronger increase in the younger age group.

A look at the sex distribution shows a fairly balanced picture. Figure 4 charts approvals of first-time proposals for Temporary Positions and the resulting participation rates (left vertical axis) for both sexes. It also shows the development of the funding rates (right vertical axis) for male and female grantees.

Figure 4 demonstrates that the share of women among approved first-time applicants for Temporary Positions was between 35 and 47 percent from 2005 to 2010. A trend is not apparent, nor does the chart indicate significant structural shifts in the sex distribution following the 2007 programme modification.

The chart also shows that the funding rate for women over the entire period averaged 36 percent and thus matched the funding rate for men. Minor differences between the sex-specific funding rates can be seen only in the years 2005 and 2010: While the funding rate for women was about five percentage points below that of men in 2005, this difference was exactly reversed in 2010.

The share of female funding recipients in the Temporary Positions Programme is above average compared to the DFG’s other individual grants programmes. From 2005 to 2010, the share of women in the Emmy Noether Programme was 25 percent (ranging annually between 15 and 36 percent) and in the Heisenberg Programme 23 percent (range: 17 to 27 percent). The largest differences can be observed when comparing newly approved individual proposals in the Individual Grants Programme, where the average share of women aggregated across the reporting period is just under 16 percent. In contrast, about 41 percent of those receiving funding for Temporary Positions were female.

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4 Different from the other statistics, which only show approved first-time proposals, this one looks at submitted proposals for Temporary Positions to allow insight into any changes in demand.
Figure 4
Approvals of first-time proposals for Temporary Positions by sex from 2005 to 2010