PROGRAM ASSESSMENT

FAPESP IMPACTS SERIES

YOUNG RESEARCHER PROGRAM (JP) - MAIN RESULTS

Program's General Information

- Assessment period: 1995 – 2006.
- Completed in 04/2008.
- A total of 340 projects were assessed, representing a total investment of BRL 103.9 million.

This document is part of a set of summaries presenting the results of impact assessments performed for the FAPESP programs. The full document with the assessment can be obtained at www.fapesp.br/avaliacao/relatorios/jp.pdf

Created in 1995 and operationalized in 1996, the Young Researcher Support Program has the purpose of providing appropriate training for young researchers, preferably in Emerging Research Centers. Additionally, it helps the creation of new research groups and expansion of the Sao Paulo state research system. The support to the researcher is made by grants and scholarships that may last up to four years.

In order to analyze the programs' impacts, an assessment of the additionality with verification of causality was performed applied to the following topics:

- Young researcher profile
- Nucleation of researchers
- Technical-scientific production
- Training and the formation of competences
- Institutional environment

The population of the program was composed by projects completed from 1995 to 2006. With a total of 393 projects; the effective sample used to evaluate was composed by 340 projects, representing 86% of the total completed projects.

Granted projects have to be developed in recipient institutions (here after IA) which were categorized in four groups: public or private, and inside or outside of the geographical axis of greatest research concentration in the state of São Paulo[1]. 50% of the projects were granted for

[1] The axis of greatest research concentration includes the cities of São Paulo, Campinas, Ribeirão Preto, São José dos Campos, Piracicaba and São Carlos.

public well-established organizations within the geographical axis of greatest concentration. Slightly over one third of the IA were located out of the axis of greatest concentration.

Access to the Program, JP profile and its contributions to scientific nucleation.

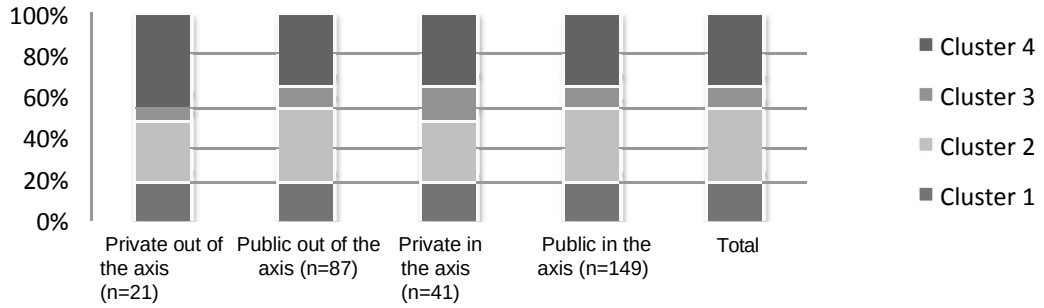
Participants in the Young Researcher program were mostly researchers already integrated to the system, with a reasonable experience as researchers and an average age of 42, with 72% of the participants at post-PhD levels.

Most of the researchers decided to join the program for two main reasons: the program profile together with the amount of support provided by FAPESP and the expectation of establishing a professional link with the recipient Institution. However, 26% of the Young Researchers in the sample had already had an employment link with the IA - leading to the understanding that the grante and scholarship involved and a certain degree of independence in their activities are the main motivating factor. At the end of the analysis, it was observed that 42% of the JPs were hired by the IA.

A multivariated analysis allowed finding groups with higher performance. A set of 14 variables involving the following aspects was applied: existing JP scholarship; employment link; impact of the JP project on the graduation and post-graduation of the IA; dedication to teaching in IA, publication; advisory sessions; motivation for submitting projects to JP and criteria for choosing IA; among others.

Four clusters were found, being cluster 4 the most notable one for this represented researchers with higher scientific production and academic engagement into IA. The surprising thing is that this cluster, as seen in Graph 1, is mostly based in Private Institutions out of more traditional geographic area. This means that such institutions received and held JP projects with high performance in spite of being in non-traditional organizations and regions.

Graph 1 – Distribution of geographic groups according to the multi-varied analysis clusters -- JP (n=298)



Regarding the nucleation of research groups, 70% of the JPs created new or boosted existing research groups and 87% of these groups continue active even after the conclusion of the project. The Group of private organizations out of the geographical axis was the one that created most research groups, and 71% of these groups were inserted in the Natural or Earth Sciences, Biological Sciences and Engineering fields.

Technical-scientific production and formation of competences.

The scientific productivity increased after the support of the JP program. Performance in terms of scientific production and guidance of researchers allocated in private institutions was slightly higher than those that were allocated in public institutions. In public organizations, there is a greater dispersion in terms of productivity, while the opposite happens in private institutions. Chart 2 shows the type of scientific knowledge produced in the projects.

Chart 2 – Main types of scientific production.

1. 9 projects sent or published 14 papers in Science and/or Nature;
2. 63 projects generated innovations;
3. There were 469 research results reported:
   - 366 scientific advancements
   - 21 new products
   - 20 new software
   - 50 new processes
   - 3 new services
4. 39 intellectual property rights were filed or received (35 patents).

In terms of training and building capabilities, 70% of the JPs and 77% of the IA stated that the JP program helped in post-graduation programs, especially regarding the creation of new courses. 55% of JPs and 64% of the IA stated there was an impact on the undergraduate courses.

Regarding the formalization of new cooperation agreements due to JP, 16% of the projects received such link - 78 agreements with national institutions and 82 agreements with international institutions.

Conclusion

The sample analysis shows that the JP Program has a comprehensive profile, including researchers with and without employment links. Approximately two-thirds of the analyzed sample is comprised by researchers who are scientifically very productive. The Support profile is the greatest attraction factor for the participants of the program. Additionally, it can be observed that, in terms of productivity, the researchers in private organizations out of the geographic axis had a high performance, showing a potential to expand the geographic distribution of the research within the state of São Paulo.