

# Research Careers in Europe

Study Executive Summary







#### **EUROPEAN COMMISSION**

Directorate-General for Education and Culture Directorate B — Modernisation of Education II: Education policy and programme, Innovation, EIT and MSCA Unit B.3 — Innovation in education, EIT and MSCA

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### **Executive Summary**

Prepared by: PPMI Group (Lithuania) in cooperation with CARSA (Spain) and INOVA+ (Portugal)









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#### **ABOUT THE STUDY**

"Research Careers in Europe" is a study with an evaluative character. It addresses the following three specific topics:

- 1) perception and promotion of research careers;
- 2) dual careers in research;
- 3) research career restart.

The key insights and conclusions presented in this report, as well as most of the study recommendations were developed to help the European Commission to improve the design and implementation of the Horizon 2020 Marie Skłodowska-Curie actions (MSCA). This programme aims to further contribute to stimulating commitment towards research careers and to support attractive employment and working conditions for researchers in Europe.

The evidence for drafting this study was mainly drawn from the quantitative and qualitative data collected through an extensive survey programme. In particular, 3,904 individual researchers, 1,572 representatives of research organisations and a number of national stakeholders (National Contact Points for the MSCA, research funding organisations, etc.) were surveyed by the study team.

The study also benefited from the qualitative data collected through interviews with EUlevel officials and people involved in practical implementation of relevant initiatives (i.e. programmes and schemes dedicated to addressing the dual career or career restart issues, as well as promotion of research career promotion) at national level. Further evidence was drawn from 10 case studies and extensive desk research (i.e. the analysis of other relevant studies and documentation published by researchers, organisations implementing relevant initiatives and other actors in the field) carried out by the study team.

The study was carried out by PPMI (Lithuania), in close collaboration with two subcontracted companies, namely INOVA+ (Portugal) and CARSA (Spain).

#### Research career promotion

#### Aspects covered by the study

The first part of the study is dedicated to analysing the current state-of-play in European countries in relation to research career promotion, covering aspects such as the most successful practices implemented for reaching out to schoolchildren and university students, the key motivating factors behind the decision to become a researcher and the role played by employers in promoting research careers. Furthermore, it provides a good deal of evidence and insights on outreach activities implemented in the course of different M(S)CA projects and activities offered to participants of NIGHT events and their contribution to research career promotion amongst youth.





#### Key study conclusions and recommendations

University-level initiatives were generally found to be more effective in encouraging young talented people to choose a research career, compared to initiatives that target schoolchildren. Study results also show that providing attractive financial conditions is one of the most successful type of instruments for promoting research careers among university students, whereas poor financial conditions is the single most important factor that discourages young people from choosing and remaining in research careers in Europe.

The effectiveness of the initiatives aiming to motive university students to pursue a research career Public events to popularise science and the 25% 13% 8% research profession Improving the quality of doctoral training 23% 16% 8% 7% Supporting international and/or intersectoral 21% 11% 17% 9% mobility of young researchers Dissemination of information for students on the 13% 14% 3% 19% 10% research profession and its career prospects Measures and practices to increase transparency 12% 13% 6% 24% 13% and equal opportunities in researcher... Improving working conditions for researchers 11% 14% 27% 9% Measures and practices aiming to motivate more 33% 14% 9% 13% 3% women to pursue a research degree in specific... Formal requirements for researchers to promote 11% <mark>4%</mark> 41% 19% 5% science among students Measures and practices aiming to motivate more 14% <mark>3%</mark> 43% 20% minority groups to pursue a research degree Other 89% 6% 20% 40% 60% 100% 0% 80% Very successful Somewhat successful Somewhat unsuccessful Very unsuccessful Not implemented Do not know / cannot answer

#### Recommendation No 1:

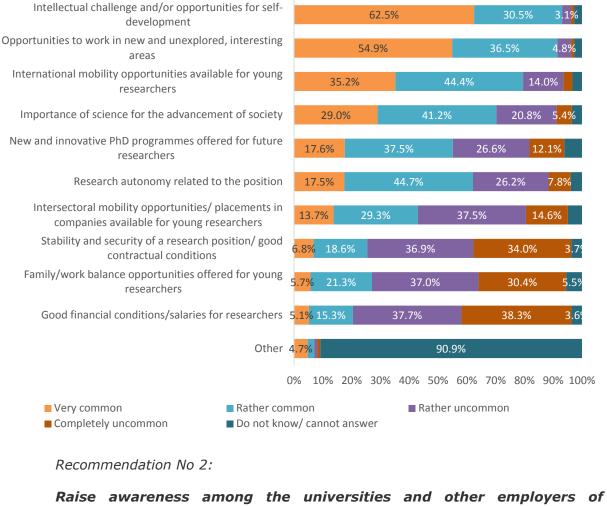
Continue **improving the financial conditions and opportunities for researchers, particularly those at earlier stages of their careers** (PhDs and postdoctoral researchers), in order to promote research careers and increase their attractiveness. Develop new funding schemes at both national and organisation-level or continue implementing the existing regional, national or EU level programmes and initiatives that support young talented students intending to pursue a research career (grants, stipends, scholarships, etc.), while continuing to incentivise recognised researchers to stay in research. For this purpose, it is particularly important to exploit the synergies and coherence with the Marie Skłodowska-Curie Actions and the European Research Area.





Awareness and willingness to cooperate among the employers and local researchers was one of the key success factors of the measures aiming to promote research careers among young people. Study results also showed that employers of researchers are generally well aware of the most compelling arguments and very often use these arguments in encouraging young people to pursue a research career. However, arguments concerning a good balance between work and family life are seldom used by employers, despite the great importance of this issue to researchers.

## Arguments used to encourage talented university students to pursue a PhD degree and/or to motivate young researchers to stay in their current careers



researchers of the importance of promoting research careers among young people. More specifically, employers should provide more information on the possibilities of balancing work and family life, as it is one of the most important criteria for young people considering a research career.





The most popular forms of outreach activities in the Marie Skłodowska-Curie Actions were public talks and participation in conferences and lectures, while interactive activities were pursued less frequently and carried out mainly in a wider framework of science popularisation initiatives.

Recommendation No 3:

Increase the scope of outreach activities in the Marie Skłodowska-Curie Actions, make them more experiential/interactive and better adapted to a non-scientific audience by reviewing the guidelines for outreach and communication activities:

- Take action to achieve a better balance between the outreach and communication activities in the career plans of the Marie Skłodowska-Curie fellows;
- Encourage cooperation between the Marie Skłodowska-Curie fellows, other researchers and research staff in host/partner organisations (especially under the projects supported by the host-driven actions) and other stakeholders (from the public sector or society);
- Emphasise the possibility of using outreach activities to address the existing gender disparities in research;
- Aim to to achieve more synergies between the outreach activities in the Marie Skłodowska-Curie Actions and science promotion initiatives developed in beneficiary organisations.

Abstain from setting any mandatory instruments for outreach activities, as they should be kept flexible in order to adapt them to the local (regional) situation or different organisational contexts.

The number of Marie Skłodowska-Curie Actions project reports where youth is prioritised or directly mentioned as the key target audience of outreach and other dissemination activities is quite small, partly due to the requirement to limit reporting to dissemination activities.

Recommendation No 4:

Review the Horizon 2020 Model Grant Agreements for the Marie Skłodowska-Curie Actions and the reporting system. **Specify provisions and reporting requirements/guidelines with regard to outreach activities (as opposed to general dissemination activities**), in order to gather more precise data at the project level and better assess the scope of outreach activities implemented under these actions. Analyse this monitoring information and discuss it with the responsible Commission and REA officials in order to exploit this follow-up information to improve the design and execution of these activities in the future.





In addition to raising the profile of Marie Skłodowska-Curie actions and promoting research careers, fellows of this programme used outreach and communication activities for reporting to the general public purposes and for keeping it informed about the ways in which research activities are performed and public funds are spent.

Recommendation No 5:

In the implementation of the new strategic priorities on Open Innovation, Open Science and Openness to the World **explore how the societal engagement of Marie Skłodowska-Curie fellows can contribute to advancing an agenda for Open Science in Europe**. More specifically, take steps to ensure that the Marie Skłodowska-Curie fellows are provided with **training on open science** in order to better prepare them for the implementation of the European Open Science Agenda.

The most successful activities of the European Researchers' Night were 'hands-on' experiments, shows and other activities of an interactive nature. Despite the overall satisfaction with the events, some features of the European Researchers' Night could still be improved by expanding their duration and implementing other project-level changes.

Recommendation No 6:

Continue **employing adequate science popularisation instruments and differentiating them according to the target groups** (interactive/experiential methods for schoolchildren and different types of public events for students) during the events of the European Researchers' Night. In order to attract more schoolchildren, students and working adults, suggest **making these events more accessible, improving their advertising and selecting larger capacity venues**. In the future consider extending the duration of these events by dedicating a whole weekend to science promotion among the general public and young people.





#### **Dual careers**

#### Aspects covered by the study

The second part of the study is dedicated to the analysis of dual careers. On the basis of collected evidence, the study outlines the profile of researchers dealing with difficulties due to being in a relationship, particularly dual-career couples, and how this impacts their career paths/personal life choices, namely their mobility-related decisions. Moreover, the study provides an overview of how and when dual-career issues are being raised during the recruitment processes and analyses the possible impact of addressing these concerns on the outcome of negotiations. The study also explores the existing procedures and measures to support dual-hiring, as well as the strategies, policies and measures undertaken at country and/or organisation level to address the dual-career issues. Finally, the extent to which researchers and research organisations are familiar with existing dual-career support measures is presented in the report.

Within this study the following concepts are being used:

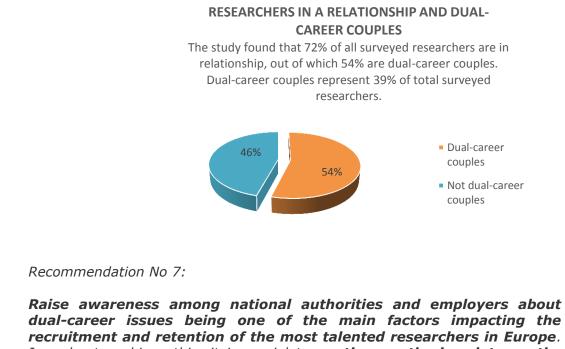
- <u>Dual-career couples</u> couples (for example, a wife and a husband), where both life partners pursue a career or seek jobs that are highly demanding and strongly oriented at career progression, and at least one of them is a researcher;
- <u>Difficulties due to being in a relationship</u> problems that potentially affect the professional and/or personal life of the researchers or their partners in a negative way (for instance their mobility, their recruitment process and outcome of the negotiation, their jobs, etc.);
- <u>Mobile researchers</u> researchers who have moved at least once to another country in their professional lives;
- <u>Newly hired researchers</u> researchers who were hired over the last five years;
- <u>Dually-hired researchers</u> dual-career couples hired over the last five years, jointly or sequentially, by the same employer in approximately the same or in a different geographic location.





#### Key study conclusions and recommendations

A significant number of European researchers face career difficulties linked to the fact that they are involved in a personal relationship, in particular when they hold some ambition for international mobility. Personal/family reasons and related dual-career issues, such as the possibilities of finding a job for their partner, are the main factors influencing their decision to move or not to another country. Among the researchers in a relationship and in a dual-career relationship, the share of mobile researchers is nearly the same as for researchers that are single. However, although the mobility rate of researchers involved in a relationship (including dual-career couples) does not seem significantly affected from a quantitative point of view, it may be affected from a qualitative point of view, leading researchers to make different choices in how they address their mobility and in their career development strategy.



In order to achieve this, it is crucial to **continue gathering data on the number of researchers in a dual-career couple relationship and measuring other important indicators on dual careers as part of regular surveys or studies** addressing career paths and mobility patterns of researchers in Europe.





Financial aspects are reported as the main barrier faced by research performing organisations when trying to deal with dual-career issues. For the small number of employers that have established internal procedures and practices to face these issues, the most frequent measures include the provision of facilities for work-family balance and family-friendly benefits for researchers and their partners. However, only a few researchers and representatives from research organisations acknowledge the existing measures as fully effective.

#### Measures and practices implemented by organisations to address dual-career issues, from the perspective of organisations



■ EU28 ■ Associated Countries ■ Academic ■ Non-Academic ■ Other type of organisations

#### Recommendation No 8:

**Provide more funding for organisations or initiatives that support the implementation of effective dual-career services**. Another option could be to support dual-career networks, which may involve **collaborative strategies between HR departments of academic and non-academic organisations, considering that these networks have proven to be quite useful in supporting researchers with dual-career issues**. These networks, often regionally oriented and working bottom-up, should be showcased and their results disseminated at European, national and regional level, in order to raise awareness and inspire the creation of other similar *initiatives* and networks across Europe.





Another way for organisations to deal with dual-career issues when the dual-career couple is composed of two researchers is to set in place dual-hiring policies, implemented through adequate measures/procedures. However, in Europe the majority of research performing organisations do not have dual-career couple hiring procedures in place and dually-hired researchers (jointly or sequentially hired by the same employer to work in the same or different location) represent only a small share of the dual-career couples. Moreover, the majority of researchers facing relationship-based career problems do not address those concerns at the recruitment stage partly due to the absence of recruitment processes that allow addressing dual-career issues in a structured and transparent way, or to the general lack of awareness among researchers of such processes and support services whenever they do exist.

Recommendation No 9:

Encourage research performing organisations to develop a clear and transparent position on dual-career couple hiring procedures and reflect it in formal documents. Promote the exchange of good practices (including mutual learning opportunities between human resources departments on different dual-career programmes) among the national authorities and research funding organisations. In addition, the debate and development of a common framework (compatible with the level of autonomy of the research organisations for the management of human resources) to tackle dual-career issues of researchers should be encouraged. This common framework should also be complemented by concrete measures. For instance, the provision of a job search tool built in the EURAXESS website that would enable a two-entry search allowing dual-career research couples to find their respective jobs within a commutable distance, could perhaps be considered.

The absence of effective strategies, practices and services to address dual-career issues at European research organisations on the one hand, and the lack of awareness among researchers of the few existing measures on the other hand, contribute to underestimating the scale and impact of dual-career related issues on the personal and professional life of researchers and their partners.

Recommendation No 10:

**Consider the possibility of introducing dual-career-friendly mechanisms in the existing EU-level programmes and initiatives**. The explicit inclusion of such measures in the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers (Charter and Code), which are recommended to be endorsed and applied by all the beneficiaries of the Marie Skłodowska-Curie Actions, would encourage research performing organisations to give dual-career issues more serious consideration. Another potentially successful strategy would be the creation of virtual communities of practice dedicated to dual-career issues, which could encourage not only the sharing of experiences and best practices (for instance, through conferences), but also the implementation of relevant actions in this area.





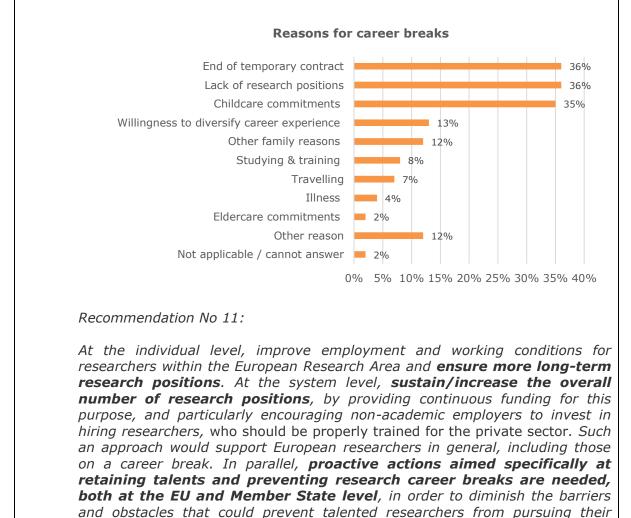
#### **Career restart**

#### Aspects covered by the study

The third part of the study focuses on the current state-of-play in relation to research career break and restart in Europe. It encompasses the analysis of various interlinked aspects, such as the main reasons for career breaks, the preparation for a career break and/or its restart, the approach of employers towards researchers restarting their careers, the measures implemented to prevent full career breaks, as well as the programmes promoting the possibility to restart one's career in research. In addition, the third part of the study assesses the extent to which the MSCA could incorporate good practices and address the existing challenges in relation to the research career break and restart.

#### Key study conclusions and recommendations

Involuntary reasons, such as the termination of temporary contracts and shortage of research positions, are the main causes of research career breaks. This effect is further strengthened by the limited research funding. This situation – sharpened by the financial crisis – does not allow the creation of long-term research positions with decent salaries. The overall precariousness of working conditions often leads talented researchers to terminate their careers.







career.

Other important reasons for research career breaks are related to childcare commitments (parental leave, maternity, paternity) and other family reasons (e.g. related to partners of researchers).

Recommendation No 12:

Considering the difficulties in reconciling work and family life, particularly for female researchers (but not exclusively), it is important to **promote effective measures aimed at preventing research career breaks** due to these specific reasons. Employers should further implement and support **flexible working arrangements, family friendly benefits, part-time working, teleworking and other similar strategies**. These practices are also encouraged by the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers, with the aim of ensuring successful research performance.

In general, there is a common negative perception among employers in relation to research career restarters, which is mainly caused by their limited flexibility due to family commitments. This limited flexibility – often interpreted as lower productivity – represents the main reason preventing employers from hiring returners. On the other hand, returners feel their employability is particularly jeopardised by their lack of updated skills on their return: the competition with other researchers who have not taken a career break was identified as the major barrier in the reintegration process.

Recommendation No 13:

Achieve greater acceptance among employers of the fact that research career breaks happen due to a number of reasons and do not represent an obstacle for talented researchers to return to their work. **Greater acceptance of research career breaks** implies a deeper change of the mindset across Europe, supported by the dissemination of relevant good practices. In particular, this process should be supported with specific initiatives and measures aimed at changing employers' perception and increasing the employability of returners. Above others, these types of measures include **financial support for research career break policies and assistance for restarters; providing individual career advice and mentoring; support for events and conferences** that help career restarters to stay informed and preserve their networks during the career break; and training with a focus on the skills that speed up career reintegration after a break.





Due to the wide geographical coverage that allows researchers of any nationality to move to any EU Member State or Associated Country, the Career Restart Panel scheme is the only EU-wide scheme that addresses the researchers' career restart issue. Despite its potential for helping talented researchers to resume their career after a break, the fellowships awarded under the Career Restart Panel are unknown to the vast majority of European researchers, particularly compared to the standard Marie Skłodowska-Curie Fellowships.

Recommendation No 14:

Considering the low level of awareness among researchers of the Career Restart Panel, **increase its visibility at different levels**. At the EU level, being the key EU communication channel for the Marie Skłodowska-Curie actions, the content of the official Marie Skłodowska-Curie actions website should be improved. It currently provides very little information on the Career Restart Panel, especially once a call is closed. Moreover, information about the CAR Panel is presented as part of the IEF only, and it is recommended to present some information separately as well. At the national level, the visibility of the Panel should be increased through greater actions of host organisations and National Contact Points for Horizon 2020, including email newsletter and other promotion and dissemination activities or events in order to reach and engage restarters. To this end, the staff of NCPs should also be trained accordingly.

Although the Career Restart Panel scheme is considered overall very successful in facilitating a smooth return to research after a career break, beneficiary researchers recognise that it still difficult for a restarter to pursue a permanent position afterwards. Most of the stakeholders consulted during the study – both researchers and representatives of research organisations –highlighted that the total duration of the fellowships awarded under the Career Restart Panel is perceived as too short for resuming a career after a break, which is quite a long process. After a two-year fellowship, beneficiary restarters do not position themselves at the same level as the researchers who have not experienced a career break.

Recommendation No 15:

Consider the possibility of **extending the fellowships awarded under the Career Restart Panel for another 6 or 12 months**: this would enable restarters to fully re-establish themselves and compete fairly for longer-term positions with other researchers. In addition, the training support provided could be tailored depending on the individual needs and particularly the length of the break, since long breaks require much more support in order to guarantee a successful restart.





The fellowships awarded under the Career Restart Panel are quite well paid, offer appropriate coverage of research, training and networking costs and provide adequate living, family and mobility allowance. On the other hand, the scheme could still be improved in terms of contributing to the better work-life balance of researchers as well as ensuring the gender balance in research careers.

Recommendation No 16:

Consider the possibility of supporting part-time fellowships in a more systematic way, including for professional reasons, under the Career **Restart Panel while also increasing their duration,** since part-time work under the Panel is currently allowed only for personal reasons. Although the common view on the Marie Skłodowska-Curie actions is that full-time dedication on the part of the researcher is required, the part-time option may allow restarters to gradually combine research and private life and facilitate an efficient (re)integration. Some researchers might also be more productive under a part-time framework. In this way, the European Commission would convey the message that it prioritises quality research, while at the same time supporting work-personal life balance of researchers. In this context, Marie Skłodowska-Curie actions could lead the way, as a successful good practice example for the EU Member States. This might also have some positive effects in terms of funding a greater number of female researchers. In addition, part-time arrangements would be particularly relevant to combined/part-time researcher positions, fostering knowledge transfer, networking and research collaboration among institutions and sectors.





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