

Evaluation Panel: SOCIAL SCIENCES - Economics

Panel Members

Thomas Roende (Chair)	Copenhagen Business School, Denmark
Dezsö Szalay	University of Bonn, Germany
Enrique Schroth	Cass Business School, United Kingdom
Tatiana Damjanovic	University of Durham, United Kingdom
Ulrich Kaiser	University of Zurich, Germany

R&D Units

Centro de Economia e Finanças da Universidade do Porto (CEF.UP)	Faculdade de Economia da Universidade do Porto (FEP/UP)
Centro de Estudos e Formação Avançada em Gestão e Economia da Universidade de Évora (CEFAGE)	Universidade de Évora (UE)
Nova School of Business and Economics (NOVA SBE)	Faculdade de Economia da Universidade Nova de Lisboa - Nova School of Business and Economics (FE/UNL)
Núcleo de Investigação em Políticas Económicas e Empresariais (NIPE)	Universidade do Minho (UM)
Research in Economics and Mathematics (REM)	Unidade de Estudos sobre a Complexidade na Economia (UECE/ISEG/ULisboa)

Evaluation Panel: SOCIAL SCIENCES - Economics

R&D Unit: Centro de Economia e Finanças da Universidade do Porto (CEF.UP)

Coordinator: Nuno Tiago Bandeira de Sousa Pereira

Integrated PhD Researchers: 57

Overall Quality Grade: VERY GOOD

Evaluation Criteria Ratings

- (A) Quality, merit, relevance and internationalization of the R&D activities of the Integrated Researchers in the R&D Unit Application: 4
- (B) Merit of the team of Integrated Researchers: 5
- (C) Appropriateness of objectives, strategy, plan of activities and organization: 4

Base Funding for (2020-2023): 825 K€

Recommended Programmatic Support

PhD Fellowships: 5

Programmatic Funding: 371 K€, including for 1 (Junior) New PhD Researcher Contract.

Justification, Comments and Recommendations

CEF.UP has generated an impressively long list of publications over the past period. It does not, however, predominantly consist of publications in first tier outlets. The quality of the publications overall appears to be on the rise and our visit clearly brought the message across that aspirations are high and rising. It hence seems to be of utmost importance for Unit to prioritize publications in first tier journals since it is essentially those publications that directly affect international recognition and the attractiveness of the Unit on the international science landscape. That having been written, CEF.UP does already command over a respectable amount of papers in a top five economics journal (Econometrica) and top field journals (Journal of Monetary Economics, Marketing Science and Economic Journal) such that there exists a firm fundament for an upward publication trajectory.

Right now, however, there is a non-neglectable heterogeneity in publication and, relatedly, publication quality with a single very eminent scholar, Mónica Sofia da Costa Dias (who, however, is primarily affiliated with IFS London) and a couple of scholars with international reputation like Helder Ferreira Vasconcelos and Joana Rita Pinho Resende.

CEF.UP members overall make a strong team in terms of both academic and public policy impact. The academic merits of the Unit members are quite mixed but to a lesser extend as the other Units we evaluated – there is no single Unit member who stands out, but academic merits are distributed to a fairly large number of shoulders. Furthermore, CEF.UP members were invited to visiting positions at prestigious institutions.

CEF.UP members have not yet managed to publish in international top general interest journals. The fundament for such excellent achievements appears to be laid, however. There is also room for improvement in terms of the integration of the Unit. An increased joint use of the data sets that the Unit possesses as well as the move into the new building, data will certainly improve collaborative work.

There is a rigorous procedure to enter the Unit which involves an external review. However, the Panel notices that the criteria to stay member is much less strict. The selection of members and the conditions for prolonged membership should be revised to reducing heterogeneity among Unit members and stronger incentives for academic excellence.

The Unit's body of PhD students is quite international. We interpret it as a sign of quality that the students referred to their first year of classes as "demanding but worth it".

CEF.UP doctoral program appears to be working well and has produced a good number of students who were placed internationally. It maintains joint activities like the ranking of Portuguese scholars (which in turn is joint with NIPE) and runs a prestigious visitors program and an active international seminar series.

Overall, the PhD program seems to be fairly small by international standards and it is perhaps too small to reach minimum efficient scale. Given the financial restrictions faced by the Unit (and the school overall) it would be recommendable if it joined forces with other local institutions like FEUP, Porto School of Business and Catholica Porto.

CEF.UP report writes about a “close relationship” between the Unit and some of those institutions already. Students do, however, have the opportunity of attending specialized courses abroad, something that they highly value.

A clear asset of the PhD school is the visitors program that attracts high calibre scholars from across the world who teach advanced courses and who also appear to mentor and sometimes even co-supervise the PhD students of CEF.UP. These activities are very highly appreciated by the PhD students and could perhaps be extended to provide students and visiting faculty with an even better opportunity to interact ever more closely.

The PhD students seemed overall very happy about their working conditions except for, perhaps, a low number of scholarships (a general issue across all Units evaluated). Apart from the advanced courses and their possibility to travel, the students in particular appreciated the openness of senior members to new ideas and initiatives like new seminars or workshops as well as their strong willingness to help and mentor along with their accessibility. Both senior members and PhD students are looking forward to moving into the newly renovated building that will house the entire Unit since that will further the interaction between Unit members.

The performance of past PhD students on the job market is quite good, which the Panel interprets as a sign of international ambition. It would, however, be recommendable to invest into a more structured approach to set ambitions high. Since many of the members are well acquainted with international recruitment processes, such an initiative should not come at a very high cost.

CEF.UP is maintaining an active seminar series which features internationally recognized scholars. It is run separately by each of the three research groups within the Unit. Seminars run weekly and alternately among groups. The summer workshops are of very high quality and internationally recognized. They also constitute a common activity of the Unit. In the discussion with the Unit members it was mentioned that conference attendance had decreased over the past year which was traced back to the ageing of the Unit members. Still, it seems important to encourage members to attend international high quality conferences to receive outside inspiration.

CEF.UP members are avid advisors to national and European government bodies. Among its clients is the Portuguese Government, the Portuguese Parliament, the European Commission, the International Labour Organization, regional and local authorities as well as national regulators. It clearly is an indicator of high quality that CEF.UP members are so high in demand for policy advice. A natural next step, however, seems to be an attempt to leverage such policy initiative to academic research to a larger extend. Finally, it should be mentioned that Unit members received a substantial amount of media coverage.

The Unit and/or the host departments have chosen only to let the Unit administrate FCT grants for R&D Units. This makes it difficult for the Panel to judge how the Unit has performed in terms of raising external funds. Indeed, it seems that the Unit has only obtained additional funding from a single source, FEP - Instituição Proponente. Obviously, it would give the Unit more autonomy if it administers a larger share of the external funds that the members raise.

CEF.UP appears to overall be a well operating Unit. Given it is a result of a fairly recent merger between two different Units, CEF.UP appears to be a well operating Unit overall. There appears to be some need for additional joint activities, especially within the research groups. A natural “bridge” between the individual Unit members and the three research groups could lie in the use of the large and comprehensive data set CEF.UP commands over. This data set is a strong asset and should be further used and facilitate cooperation between CEF.UP members. Adding the joint move into the new commonly used building to the data asset suggests a bright future for even stronger future cooperation.

The Unit members are strong at attracting policy consulting opportunities which the Panel highly appreciates. A natural next step would involve a stronger use of such consultancy projects for academic research.

CEF.UP objectives for the FCT financing period to come are undoubtedly appropriate. It seeks to maintain a constant flow of high quality publications, to improve its international recognition even further and to improve on the cooperation of Unit members.

CEF.UP appears to be contemplating the idea to include management scholars within the group. The Unit has been going in the direction with the increased focus on entrepreneurship, a research field at the intersection between management and economics. Increasing the research scope always comes with the danger of reducing cohesion of the Unit. This is perhaps a particular concern in the case of CEF.UP that is the result of a recent merger and where seems to be scope for more collaboration among the members. Still, there seems to result obvious synergies from including management scholars who work on related topics and/or use similar data and methods.

CEF.UP strives for academic excellence of its researchers. It does so by supporting PhD students, running an international visitors program, collecting and maintaining datasets, hosting conferences, encouraging publication activity by center members. The center is nationally very visible through workshops, testimonials for government agencies, and a substantial amount of media coverage.

CEF.UP is an institution on the rise. It has markedly improved on its research output through the hosting of conferences, publications and its PhD school. The key figures reported indicate progress on all fronts.

The Unit clearly pushes for academic excellence and also got substantial traction here. The Unit as such appears to work well even though there appears to be scope for a deepening of joint activities. Students are prepared to going to the international job market and the Unit has placed students quite well in the past. The students are supported by funds allocated to the respective recruitment events. It is certainly a good idea to max out the benefits of having unique dataset at the disposal since data and methods are key areas which may generate synergies.

The Panel recognizes that CEF.UP is a successful R&D Unit with impact on both academia and society at large. To achieve its full potential the Panel would like to bring forward the following recommendations:

- First, CEF.UP is the product of a fairly recent merger, and there is seems to room for initiatives to increase collaboration among the members. Here, the Unit should aim at exploiting the opportunities for interaction that the move into a common building will provide.
- Second, the Panel believes that academic research at CEF.UP could substantially benefit from its consultancy services. Indeed, these activities have so far been quite disjunct and could gain from one another.
- Third, the requirement to stay member of CEF.UP appears to be quite weak. A stricter requirement will incentivize research and make the Unit more homogenous in terms of overall performance.

The Panel encourages CEF.UP to join forces with other institutions in doctoral training. All schools involved would certainly benefit from such joint activities since there appear to be massive returns to scale and scope to be harvested.

The Unit should tackle the placement of its PhD students in a more structured way. The Panel acknowledges that students have so far been quite well placed. Still, given the ambitions in this area, this is an issue that deserves further attention and where the Unit is behind best practice.

The visitors program is very well received by the PhD students. CEF.UP should consider extending the duration of stay of the international scholars in order to enable students to get in closer contact with these scholars, perhaps by attracting additional outside funding.

CEF.UP requested a total funding over the four years period of 236000 Euros, without any itemized breakdown of the individual requests. Particularly, the request for the repository for macro and micro data (80000 Euros) has not been well justified in detail. Overall, the report submitted to the Panel as well as our visit made very clear that such a repository is much needed. The Panel also sees the need for acquiring new datasets, even though perhaps not at the requested scale (9000 Euros). The visitor's program is, as our report repeatedly mentions, highly appreciated but quite large in scale (45000 Euros). The advanced courses program is an asset of CEF.UP and deserves support.

We do not see a clear need for additional dissemination activities.

Evaluation Panel: SOCIAL SCIENCES - Economics

R&D Unit: Centro de Estudos e Formação Avançada em Gestão e Economia da Universidade de Évora (CEFAGE)

Coordinator: Jacinto António Setúbal Vidigal da Silva

Integrated PhD Researchers: 48

Overall Quality Grade: GOOD

Evaluation Criteria Ratings

- (A) Quality, merit, relevance and internationalization of the R&D activities of the Integrated Researchers in the R&D Unit Application: 3
- (B) Merit of the team of Integrated Researchers: 4
- (C) Appropriateness of objectives, strategy, plan of activities and organization: 4

Base Funding for (2020-2023): 564 K€

Recommended Programmatic Support

Programmatic Funding: 252 K€.

Justification, Comments and Recommendations

CEFAGE increased its publication output compared to the previous period by more than 30% and the increase was even higher for the higher-ranking journals listed in CEFAGE's journal ranking. This is an indication that research is becoming more internationally-oriented and that greater emphasis is put on quality in publishing. The Panel shares the view that greater emphasis should be put on quality rather than quantity, and thinks that CEFAGE is moving in the right direction. However, the Panel also notices that there are few publications in the very best field and general interest journals within management and economics. None of the contributions has been published in a top 5 general interest journals. However, there are publications in leading top field journals in economics and management such as Journal of Public Economics and Tourism Management.

CEFAGE research scope is wide over topics as distant as DEA and tourism research. CEFAGE may want to develop an even more coherent research strategy in order to fully reap the benefits from joint research and funding activities. The Panel highly appreciates that CEFAGE has undertaken important steps in this direction already by substantially reducing the number of thematic strands.

CEFAGE is very successful at attracting external funds. At the same time, it appears that there is room for increasing the share of the research output generated by these funds that is transformed into academic research publishable in leading international field journals. The exception seems here to be the area of Tourism Research where the group is heavily involved in regional projects but also has a good publication record.

The Integrated Researchers of the Unit are heavily involved in doctoral programs at host universities in the areas of Economics, Management, Tourism, Agribusiness, and Sustainability. The program in Economics is a joint venture among two of CEFAGE host universities whereas the program in Agribusiness and Sustainability involves a number of European partners. The Panel appreciates these joint activities, which clearly have the potential to increase the quality of the programs. CEFAGE is now pushing to make the program entirely in English, which is a step in the right direction of increased internationalization. Similarly, more doctoral theses are paper-based, which makes the path to publication shorter. The programs are well-structured and offer a good set of courses. The majority of the students in these programs appear to be part-time and to work outside of academia after graduation. Indeed, CEFAGE and the universities involved have developed a business model that allows these students to do a PhD while working, something that requires flexibility and unconventional solutions. The PhD workshops are highly appreciated by the students but there appear to be a demand for further activities that integrate the students in the research environment.

Starting in 2014, the Unit has also organized an annual doctoral consortium. In the period considered, researchers at CEFAGE supervised 40 PhD theses and almost 200 master theses. These numbers constitute a significant increase compared to previous periods. CEFAGE PhD students are predominantly from Portugal and also graduated from Portuguese institutions.

Overall, the Panel believes that doctoral training provided by CEFAGE is a very valuable input to the local region. At the same time, it is clear that these programs are not competitive from a purely academic point of view. The Panel believes that there exist programs in Portugal that provide students with a better training for an academic career. At this stage, the Panel believes that CEFAGE should develop its apparent strength as a part-time PhD program by, e.g., organizing more activities for the students that tend to feel somewhat isolated in their academic endeavors. Some office space where part-time students could meet and work might also be a good investment.

CEFAGE is maintaining an active seminar series which primarily features nationally recognized scholars. It also organizes an annual workshop where members present new papers. In the period considered, the Unit has also organized a number of national and international workshops and conferences. A major event organized by CEFAGE was the annual conference of the European Association for Research in Industrial Economics (EARIE) in 2013. Organizing a major conference such as EARIE is a huge effort but clearly has increased the international visibility of CEFAGE.

Most CEFAGE members have a PhD from the three main institutions involved. Some have a degree from abroad, mostly from good British institutions. However, they co-author with scholars from many different foreign universities. Members of CEFAGE have been active presenting their works at national and international academic events. The Panel believes that it contributes to creating a research-oriented culture that there are clear entry and exit rules and that research funds are allocated according to performance in research.

In terms of outreach and societal impact, members of CEFAGE have done research related to Agribusiness, Tourism and Maritime research as well as sector-specific studies such as olive oil, wine and pork production. The projects involved local firms and regional institutions. Knowledge transfer plays an important role in the development of Alentejo region, and these activities are certainly have positive societal impact. While CEFAGE appears to be a core source of knowledge for the regional economy, it does not seem to actively reach out to the broader public through media or related activities.

In the period 2013-2017, CEFAGE was successful in attracting external funds from national research agencies, international research programs, as well as industry-related programs in Portugal and abroad. The Panel notices that funding from the European Commission constitutes an important part of the funding in the period considered. This is a significant achievement, and it decreased the exposure of the Unit to public budget cuts. In addition, external funding has steadily increased since 2007. The Panel also interprets this as a sign of international recognition of the applied research of the Unit from policy makers. Its research in agribusiness and tourism appears also to be highly respected by policy makers.

Members of CEFAGE are generally research active. Most have an international orientation and publish in recognized academic outlets with an impact factor. However, the Panel notices that there is significant variance in productivity of the Integrated Researchers inside the Unit. Some manage to publish in high-ranking field or general interest journals, but there are other members of the Unit that do not. In general, as noted above, there are few publications reported in the very best journals in the profession. However, this is partly due researchers have left for other universities. There is a strong research environment in the area of tourism that delivers a good number of publications in the leading field journals.

CEFAGE is an important center of knowledge in its region and plans to improve its position by strengthening the research activities. CEFAGE also has clear objectives to increase fund raising and a good idea of what type of funds are feasible to attract. CEFAGE aims at achieving these objectives through the provision of research infrastructure, hiring and training of researchers, as well as international networking and dissemination activities. Here, in particular, the provision of databases literature seems to be crucial for the productivity of the Unit.

The Unit is divided into four research groups. In addition, there are four thematic strands that involve researchers from different research groups. The number of thematic strands has been reduced compared to the previous period in order to focus on the most successful strands and on those that most relevant for CEFAGE goal of contributing to the competitiveness of the host universities local regions. The Panel believes that a more focused strategy is likely to bring research benefits and increase the coherence of the Unit.

In terms of networking, the plan is to organize high-quality scientific events. These activities have been very successful in the past and represent an effective way of increasing the visibility of CEFAGE.

In terms of dissemination, CEFAGE has partnerships and collaborations with various local partners and plan several applications for projects that have the strengthening the local economies as their objective. CEFAGE also plans to apply

for projects related to societal challenges within the EU Research Framework programs. Overall, the ambition is to increase the amount of external funds raised, which is clearly desirable but also seems feasible given the strong track-record of CEFAGE in raising external funds.

Strengths:

- Increasing publication output. Upward trend in quality.
- Scale and scope effects are harvested by combining scholars from a quite wide range of institutions.
- Increased internationalization through publication, visits, conference and workshop participation and perhaps most importantly conference organization.
- Successful bidding for EU grants.
- Regional embeddedness.

Weaknesses:

- Regional embeddedness is a double-edged sword. On the one side, it generates a deep knowledge and understanding of particular contexts. On the other side the very subjects may limit the potential for publications in the best international journals.
- Low impact of publications
- Many PhD theses written in Portuguese which severely limits international impact of the work

The Panel recognizes the need for databases but is not able to allocate the requested amounts due to a severe budget constraint. Among the databases requested, the Panel believes that JSTOR is the most important one. The Panel also encourages CEFAGE to allocate some of the funds to sponsor visitors.

Evaluation Panel: SOCIAL SCIENCES - Economics

R&D Unit: Nova School of Business and Economics (NOVA SBE)

Coordinator: Avelino Miguel da Mota de Pina e Cunha

Integrated PhD Researchers: 73

Overall Quality Grade: EXCELLENT

Evaluation Criteria Ratings

- (A) Quality, merit, relevance and internationalization of the R&D activities of the Integrated Researchers in the R&D Unit Application: 5
- (B) Merit of the team of Integrated Researchers: 5
- (C) Appropriateness of objectives, strategy, plan of activities and organization: 5

Base Funding for (2020-2023): 1156 K€

Recommended Programmatic Support

PhD Fellowships: 10

Programmatic Funding: 458 K€, including for 2 (Junior) New PhD Researchers Contracts.

Justification, Comments and Recommendations

The overall level of the research output by the Integrated Researchers at NOVA School of Business and Economics (NOVA SBE) is Excellent. NOVA SBE selection of 15 articles includes publications in all the top international journals in Finance (Journal of Finance, Journal of Financial Economics, Review of Financial Studies), Health Economics (Journal of Health Economics), General Economics (RAND, Economic Journal), and Management and Strategy (Strategic Management Journal, Journal of Organisational Behaviour). These articles are examples of original, independent work that promote scientific knowledge.

Excellence and international recognition in Finance is led by Miguel Ferreira and Pedro Santa-Clara, who are both world-renowned scholars in Finance. At the junior level, Martijn Boons has contributed with excellent publications. His case is noteworthy because he was hired in the international job market after his PhD and developed his research career while at NOVA SBE.

Research in other areas is of an excellent or very good quality and provides a national reference. In Health Economics, Pedro Pita Barros has produced applied work to influence competition, regulation, and efficient health management policies while taking other senior academic roles, including associate editorships. This work is also opening possibilities of funding by the private sector and, given the track record and expertise of the researcher, seems in a good position to attract further EU or private funds.

In Economics, researchers at NOVA SBE have also produced very high-quality contributions of applied nature, disseminated as reports from surveys or field projects. The NOVAFRICA knowledge centre has been particularly successful in raising significant international funding for applied research while also producing publications in very good international journals (Economic Journal, Journal of Development Economics).

Other important academic contributions of national relevance are in the areas of leadership and management. These are aimed at influencing the conduct of senior executives in Portugal and are disseminated via executive teaching.

The research environment at NOVA SBE is conducive to excellent work. Seminar series with top international speakers are organized frequently and across all groups. All members of the Unit must aim to publish highly relevant research, while junior members are formally mentored towards an internationally recognized career. Essentially, the research culture and its international orientation are two of NOVA SBE strongest assets.

The culture of excellence extends to the PhD programs, whose structure is geared towards the placement of graduates in good international research positions. The PhD students are capable and ambitious young researchers with a clear understanding of the career challenges they face. They attend seminars regularly and participate in research workshops with fellow students in the University of Lisbon. Ultimately, the success of the PhD programs at NOVA SBE has to be judged by the placement and subsequent career development of its graduates. While placement to date has not been stellar, it is still too early to evaluate its achievements.

The R&D Unit at NOVA SBE has achieved national and international recognition as a Centre for research in Finance, Economics and Management. A contributing factor has been its commitment to avoiding hiring junior researchers internally but from the highly competitive international job market instead. A direct consequence of this policy, together with a formal tenure track system, is that membership to the R&D Unit is highly selective.

Another merit of the R&D Unit as a whole has been the successful expansion of its funding base. In 2013, FCT was by far the most important source of funding for NOVA SBE. Since then, the school has diversified and increased its funding base significantly. In particular, it has experienced an increase in the funding coming from other national sources than FCT and from international sources. Although NOVA SBE also experienced a large increase in FCT funding in 2017, the overall picture is that the school has become more resilient towards cuts in FCT funding. NOVA SBE has also professionalized the organization of the applications for and administration of external funds.

The institution has also increased its international visibility through the organization of known conferences, such as EARIE. This year Annual Meetings of the European Finance Association will also be hosted at NOVA SBE new campus. These achievements are further confirmation of the merits of the Unit as a whole.

Some individual achievements are worth mentioning. In Finance, Miguel Ferreira has gained an ERC starting grant. His research has been effectively disseminated widely in the media and via his advice to top investment houses and governmental agencies. In Health Economics, Pedro Pita Barros is a regular keynote speaker and a figure in the European public debate on health care policy. While a strong sign of individual competitiveness, these measures of impact are signs of the merits of the entire group as well because they reflect the importance of research for the institution and the quality of the institution as a research environment.

In general, the objectives set out for the future and the strategy to keep on achieving is very good. The areas of relevance that have been singled out for maturity seem reasonable and will help NOVA SBE reputation. NOVA SBE also understands the importance of leveraging its new campus towards its international goals.

Most of the objectives stated seem ambitious but feasible and desirable. For example, the Finance group does well to aim to be top ten in Europe. Yet the R&D Unit should be more specific about the ways to maintain such a position when publishing success by its researchers is normally followed by the challenge of retaining them. The Panel notices that Leadership does not seem have the same track-record and international position as Finance. And while the Leadership and Organisation Studies group is correct to focus in its core strength of knowledge transfer through executive education, it should also expressly target publications in top international journals. Similarly, the output by the Economics group has elevated the public policy debate and it should make it an explicit goal to synthesize the lessons of its work of applied nature to publish in the top journals.

NOVA aims at achieving these objectives through provision of research infrastructure, hiring and training of researchers, as well as networking and dissemination activities. The infrastructure contains the standard elements that are expected at any leading university: access to IT and library services, research funds, an active seminar series, and administrative support.

The ambition for 2019-2022 is to continue the new structure in the PhD program in Economics and Finance and to extend it to the PhD program in Management. This involves, in particular, offering 24 PhD fellowships in Economics and Finance and 18 PhD fellowships in Management. Given the academic strength of NOVA SBE in these areas, and the efforts made in improving doctoral training, the Panel finds that continued support to the PhD programs represents a good investment.

NOVA SBE plans to hire 24 new Assistant Professors in the period 2019-2022. This represent a major investment in terms of money and time spent. It also constitutes a significant expansion of the R&D capacity; indeed, with the exception of Economics of Public Policy, the number of researchers will increase by more than 50% in the targeted areas. Assistant Professors expand the research capacity but require at the same time support and mentoring to develop their careers to their full potential. The Panel is doubtful whether such a massive intake of Assistant Professors in such a short period of time is feasible in an organization of this size; at least without compromising the quality of the candidates and the investments made in their careers. Also, given the limited human resources in the emerging areas, the newly hired Assistant Professors will have to play a central role in building up these research environments. Here, the Panel would encourage NOVA SBE to also search for more senior faculty with well-established research agendas and larger personal networks. The Panel is sympathetic towards the idea of hiring Assistant Professors with the associated

financial commitments on the side of NOVA SBE and believes that this is likely have a positive effect on the quality of candidates hired.

Most items in the Programmatic Funding seem desirable but not necessary. The items that seem most crucial are the support for the PhD summer school and the Data Science Summer Program.

The R&D Unit at NOVA SBE is an excellent international Centre for knowledge in Finance, Economics and Management. Its core strength is the research culture aimed at the highest standards of international publication and impact on science. This culture is permeating to all groups, while major steps have been taken to developing a world-class PhD program.

The culture of excellence in research has driven NOVA SBE to seek for an ambitious growth plan at all levels: senior faculty, junior faculty, and PhD students. The expectation is that the current success of its leading members will be replicated by junior colleagues. Such goals may be achieved in the future if hiring, placement and fund-raising efforts keep being coordinated across the Knowledge Centres.

If the R&D Unit at NOVA SBE has had several impressive achievements during the 2013-2017 period, there is still room for improvement in some specific areas looking forward. A top priority should be to address the current heterogeneity in the quality of output across and within some of the research groups.

Related to the differences in output is the slow pace in hiring senior faculty. This issue is particularly important because hiring seniors will also have an impact on placement of PhDs, junior productivity, via mentoring and research collaboration.

Some specific recommendations from the Panel are that:

1. Efforts are concentrated in hiring world-class senior researchers in all areas. This issue is the top priority because achieving it would contribute to fulfilling most other goals. Namely:
2. Monitor and incentivize the success of all members of the R&D Unit, juniors and seniors alike, with the objective of distributing excellence more uniformly within each research group. While much is being done to address this imbalance via interaction in seminars and sharing common goals, more can be done by direct collaboration in research projects;
3. Leverage more effectively the reputation of the most successful senior researchers to secure placement of PhD students in the job market. Moreover, the Unit must recognise that successful placement hinges on attracting students with very high potential in the first place. Hence, an important step would consist of monitoring the applicant pool to make sure applications come from graduates of excellent Masters programs abroad;
4. The PhD program in Economics and Finance could team up with REM (ISEG, University of Lisbon) to expand the courses offered, enabling students from both programs to benefit from very good training in subjects where each school is strong, e.g., Corporate Finance or Asset Pricing at NOVA SBE, and Macroeconomics and Econometrics at REM.
5. Develop observable measures to self-assess the influence of NOVA SBE research on leadership and management in the practice.

NOVA SBE has been assigned the largest number of PhD fellowships amongst all other Centres in Economics. This decision has been a function of the merit of the group and its chances to place graduates internationally.

NOVA SBE asked for many more new PhD Researchers positions but the Panel decided to also allocate positions to other applicants due to their own merit. With NOVA SBE, the Panel also thinks that new Junior positions must be complemented with senior ones, which is more challenging. Hence, the more conservative allocation.

NOVA SBE requested over 900 thousand Euros. The Panel decided to provide financial support to be partially applied to the most important initiatives, for which the University has committed to fund 50%.

Evaluation Panel: SOCIAL SCIENCES - Economics

R&D Unit: Núcleo de Investigação em Políticas Económicas e Empresariais (NIPE)

Coordinator: Odd Rune Straume

Integrated PhD Researchers: 33

Overall Quality Grade: VERY GOOD

Evaluation Criteria Ratings

- (A) Quality, merit, relevance and internationalization of the R&D activities of the Integrated Researchers in the R&D Unit Application: 4
- (B) Merit of the team of Integrated Researchers: 5
- (C) Appropriateness of objectives, strategy, plan of activities and organization: 4

Base Funding for (2020-2023): 495 K€

Recommended Programmatic Support

PhD Fellowships: 5

Programmatic Funding: 546 K€, including for 2 (Junior) New PhD Researchers Contracts.

Justification, Comments and Recommendations

The most important criterion to evaluate the quality of the scientific achievements of the Unit are the publications that have been produced over the last reporting period. Members of NIPE have achieved a very nice set of publications in internationally reputed journals. In particular to mention is one publication by Miguel Portela in *Econometrica*, a top five general interest journal. This is remarkable in two respects. Firstly, because of the quality of the outlet, but secondly because the research relates to a broader set of questions that NIPE researchers pursue. This field of interest is of relevance to the Portuguese economy.

The ten articles that were singled out to the Panel other than the aforementioned one were published in very good field journals. Among the outlets that left very positive impressions on the Panel were the ones in the *Journal of Econometrics*, *Journal of Accounting Research*, *Journal of Business & Economic Statistics*, *Marketing Science*. We believe pursuing further publications of that level is an excellent strategy and a goal worth striving for.

Overall, the Panel had the impression of a very good research production. NIPE researchers are very productive and publish regularly. In addition, some contributions reach top level. The Panel notices that there is significant variance in productivity of the Integrated Researchers inside the Unit. While some researchers are very productive researcher producing a steady stream of papers, not all members of NIPE excel in quality or quantity. There is variance with respect to the reputation of the outlets in which the members of NIPE publish. Some manage to publish in high-ranking field or general interest journals, but there are other members of the Unit that do not.

A next important criterion to evaluate the research potential of the R&D Unit are general assessments of the past research activities in the Unit. This includes various factors, first and foremost the quality of the PhD program. Moreover, various factors are crucial, such as whether there is an active, international seminar series, whether international conferences are organized, whether a summer school takes place, whether there is an internal seminar series where both senior and junior researchers can present their work, and whether there is more generally a culture of interacting and exchanging thoughts.

NIPE is involved in two PhD programs, one in Economics, which is jointly run with the University of Coimbra, and one in Business Administration. The first year consists of structured coursework that students have to complete. Afterwards students participate in courses that are designed to direct them towards choosing their topic of investigation. It is of great value to join forces with another institution to gain critical mass. This is a very good strategy.

The environment for PhD students and postdocs seems research oriented and research friendly. One particular asset to mention for them is the summer school that NIPE has established. Highly respected scholars have been attracted regularly over the past years to give summer schools on econometric topics. This is particularly well geared towards a successful research orientation of young researchers in the institution. A good research strategy for PhD students in the R&D Unit is to team up with senior researchers at NIPE to conduct empirical research of relevance to the Portuguese

economy. Such research collaborations seem generally to work out: senior researchers seem available for joint work with students.

NIPE runs a seminar series on a regular basis and invites international scholars to present. This is important to establish and maintain international connections and to expose students and faculty to the frontier in economic research beyond their own areas of expertise. The summer school should be considered as one of the cornerstones in terms of internationalization. Students are regularly exposed to state of the art research methods in econometrics. In addition, this gives students the opportunity to establish international contacts, which are vital for their future careers. NIPE also organizes workshops and conferences. A major event organized by NIPE was the Annual Conference of the European Society for Population Economics in 2014. Going forward, organizing events of similar caliber will be crucial to expand on the international reputation of NIPE.

NIPE researchers reflect a variety of backgrounds. Their internationalization is evident in two ways. Firstly, a substantial number of NIPE researchers have obtained their PhD_s outside of Portugal and have returned afterwards. Secondly, members of NIPE take important positions in recognized international associations.

NIPE produces output with impact on and of relevance for policy making. There is a very nice alignment of academic research activity with consultancy. One highly relevant question that has been addressed is “why is the productivity so low in the Portuguese economy?”. This reflects a very coherent research strategy, joining academic research and policy relevance, which is very well suited to the talents present in the team.

The engagement of NIPE in knowledge transfer and its impact are evidenced in various ways. NIPE researchers have been on the team preparing a study on internal devaluation in the context of a performance audit of the Greek Economic Adjustment Program. They have also done important work for the Portuguese Government regarding monitoring of the revenues and expenditures of Portuguese municipalities and have acted as expert advisor for the Portuguese government in preparing legislative proposals on municipal financial recovery procedures and on governing the finances of the Autonomous Regions and the Local Governments, and have acted as expert advisors for the Ministry of Labour and Social Security.

An important criterion to measure the visibility of the doctoral program is the ability of the program to attract students from elsewhere in the country and from other countries. On the other hand it is important to see whether students are placed at the national and international level.

Students are highly motivated and well organized towards completing their studies. Students have diverse backgrounds, some have done their undergraduate studies in the region, some come from other countries. Selecting students based on superior knowledge about their interests and abilities seems clearly a strategy worth pursuing for the R&D Unit. Trying to bring in new talent from outside the region should complement the current efforts. Competition for good students is hard, so this will not be easy to achieve. The focus should be on attracting students with undergraduate backgrounds that are at least as solid analytically as the own undergraduate population, so as to gradually increase the competitiveness of the Program over time.

NIPE has generally a good record of placing its students in other good universities within Portugal. NIPE has also been able to place some students abroad. Some are offered the possibility to continue their research at the University of Minho. It would be of great value to encourage students to attain the international job markets more generally and to try and obtain international exposure very early in their careers. International placements are clearly an area where NIPE can invest. It should try to establish institutions that help students go to the international jobmarkets, such as the meeting of the Spanish Economic Association, the meeting of the European Economic Association, or even the ASSA meeting in the US. These markets are clearly very competitive and it will be difficult to place initially. However, it a long run investment that NIPE should make.

The PhD program seems to be on the right track. Designating a placement officer, encouraging conference participation, applying via organized international jobmarkets, and the like are important measures that increase the success of the placements. The quality of international placements must be measured against the question whether the own students are able to find positions in universities that are internationally at least as recognized as NIPE is itself. The target level also has to increase over time so as to continuously keep moving towards improving the quality of the Program. It would be great to find the students and their work on the webpage of the institution.

It is clear that the degree of internationalization of NIPE will depend on the hiring policy of the University of Minho, on which it may or may not have an influence. However, further strengthening the international orientation of NIPE should

be a top priority for the future. The current research collaborations demonstrate that NIPE is very clearly on the right track in this respect.

There is generally a good attitude towards controlling membership of the R&D Unit, which is based on achievements in research. There is a clear goal towards producing high quality research which is of policy relevance on top of it. There is heterogeneity in research output both in quantity and quality across members of the Unit. The best research produced is clearly reaching highest recognition.

NIPE researchers have written policy reports and have advised the Portuguese Government on a number of the different issues related to the finances of the municipalities and regions as well as the labor market. One could consider strengthening the minimum requirements for membership so as to reduce the variance within the Unit.

The PhD program is working well. The seminar series is running on a regular basis. In addition the summer schools look like a strong asset that is truly valuable for the junior researchers to expose them to international faculty of highest reputation. The contacts that juniors obtain this way are crucial to advance their chances on the international jobmarket.

NIPE has been able to obtain funds obtained from other sources than the FCT, in particular European Commission. Overall funding from FCT has remained a crucial factor in the period 2013-2017. This makes the Unit vulnerable to budget cuts, and it is a structural weakness that deserves attention in the period 2018-2022.

Overall, the objectives seem very reasonable and realistic. The Unit follows a coherent research strategy that unites purely academically oriented research with policy relevance. The summer schools reinforce the strengths of the group in econometric research. The group makes efficient use of data bases. NIPE seems extremely efficient at using the resources it obtains and achieves a high level of quality with a comparably small group. The culture of excellence in publication should be maintained and further strengthened, perhaps by increasing incentives for publications in top five general interest journals with a wide international recognition.

Joining forces with other universities to gain critical mass in the PhD program is a very good strategy. Over the next period NIPE should invest in increasing its international visibility on the output side of its doctoral program. A jobmarket placement officer would be crucial, in particular if the number of students that defend increases in the future.

Overall, NIPE is clearly a very interesting research environment. The group pursues a common objective and maintains institutions that are crucial for an academic atmosphere. The right steps towards an ever increasing degree of internationalization are done and should be further pursued and strengthened in the future. NIPE is clearly a very good research institution, which demonstrates that it can reach excellence with an appropriate focus on the right steps.

The Panel recommends that at least 3 of the 5 PhD fellowships awarded shall be awarded to the PhD program in Economics.

Every effort should be made to attract students with undergraduate degrees from universities that offer education of at least the same rigour as University of Minho offers so as to continue and strengthen the efforts to create a competitive and challenging environment.

Every effort should be made to recruit the young researchers internationally. They should have a PhD from an institution whose doctoral program is of international recognition at least of the same level as NIPE, to maintain the ambition for an ever increasing level of the quality of the institution.

NIPE is a Very Good R&D Unit which is likely to reach excellence if it pursues its current strategy.

Evaluation Panel: SOCIAL SCIENCES - Economics

R&D Unit: Research in Economics and Mathematics (REM)

Coordinator: António Manuel Pedro Afonso

Integrated PhD Researchers: 70

Overall Quality Grade: VERY GOOD

Evaluation Criteria Ratings

- (A) Quality, merit, relevance and internationalization of the R&D activities of the Integrated Researchers in the R&D Unit Application: 4
- (B) Merit of the team of Integrated Researchers: 5
- (C) Appropriateness of objectives, strategy, plan of activities and organization: 4

Base Funding for (2020-2023): 971 K€

Recommended Programmatic Support

PhD Fellowships: 4

Programmatic Funding: 373 K€, including for 1 (Junior) New PhD Researcher Contract.

Justification, Comments and Recommendations

The research team has a unique strong advantages in fundamental Quantitative disciplines, such as Econometrics, Statistics, Time Series, Financial Econometrics, Mathematical Finance, Macro- and Micro-econometrics, Actuarial Sciences, Dynamical Systems, Mathematical Analysis, Operational Research. This is a valuable potential which is not completely utilised. The team consists of 6 research groups some of which are strong and have publications in top international journals. However, the Unit requires further integration in order to fully exploit positive synergy including the possibility of interdisciplinary research.

The majority of people publish in internationally recognized journals. The team is particularly strong in econometrics.

REM has an especially strong Econometric research group. Thus, Esmeralda Arranhado Ramalho published eight articles since 2012, which include publications in the Review of Economic Studies and the Econometric Review. João Nicolau has a recent publication in the Review of Econometrics and Statistics. Paulo Parente recently published in the Journal of Econometrics, Journal of Business and Economics Statistics and Econometric Theory.

The Macroeconomics group combines strong research with policy impact. Some researchers are very productive in applied macro research. Thus, António Afonso published more than 20 papers in the last two years. Luis Catao worked as a senior economist and acting deputy division chief in the research department of the IMF and he recently published in the Journal of International Economics. Ettore Panetti published in the Review of Finance. Caterina Mendicino works closely with senior research economists of the ECB and the Bank of Canada. She has recent publications in the Journal of Monetary economics and the Journal of Money, Credit and Banking.

They also have a very strong Microeconomics research group. David Luca Optomola research includes theoretical and applied contributions to the fields of international trade, migration, labor economics, industrial organization, and public economics. He also works as principal research economists at the Bank of Portugal. His publications include the Journal of Political economy, and two papers in the Journal of International Economics. Sandra Maximiano published in the Review of Economics and Statistics. Joana Pais is a specialist in matching theory and experimental economics. She recently published in Games and Economic Behaviour and two papers in Experimental Economics.

REM was successful in securing competitive FCT research grants in Microeconomics (matching theory), Macroeconomics and Regional study topics. The grants involve international collaboration with well regarded international universities such as Indiana University, Università di Bologna, Cardiff Business School and Norwegian Business School.

REM currently hosts three PhD programs: Economics, Applied Mathematics for Economics and Management, and Development Studies. The PhD in Applied Mathematics for Economics and Management is designed for those who wish to learn and develop mathematical methods and techniques used in Economics and Finance.

The PhD program in economics is taught in English and comprises three years. In the first semester students take four advanced core modules such as Macro, Micro, Econometrics and Mathematics for economists. The second semester consists of two compulsory modules of topics in macro and microeconomics, and PhD research seminars, where doctoral students can present their ideas and get feedback from the senior staff. There is also an elective module of Quantitative methods in Economics.

The PhD researchers value highly the Microeconomics and Macroeconomics clubs which are run jointly by REM and SEB-Nova. The students seemed to be very happy with the programme and they especially value help and availability of the senior staff.

However, in the Panel opinion one semester of taught coursework is too tense. The teaching of core modules during two semesters would make ISEG and REM more competitive on the international market.

The PhD program is geared towards people working in industry (Bank of Portugal, Insurance sector). Some modules starts at 6 p.m. and are designed to educate people who work in the Portuguese public sector. This is an important mission which creates a positive impact on the Portuguese society and economy. At the same time, this keeps the program from being purely academically oriented. A large number of the students have the intention to work for the Bank of Portugal or in the private sector after graduation rather than searching for academic jobs. That can be explained by two factors. First, there were very little academic job openings in the last 10 years in Portugal. Second, students do not consider the possibility of finding a job abroad. Probably a better structured support during placement time would promote students orientation towards academic careers. Among such measures could be students research visits abroad and financial support to attend the international job market.

REM runs two weekly seminar series (ISEG 2S and CEMAPRE) and invites international researchers and policy makers. The seminars are very popular among, PhD students and Postdocs as they have the opportunity to discuss their research with prominent scholars and receive valuable feedback.

REM regularly organises a number of high profile international conferences, among them the annual the Lisbon Meeting in Game theory and applications. This year the keynote speakers are world leading researchers: Itzhak Gilboa (Tel-Aviv University), Itay Goldstein, (University of Pennsylvania), Alvin E. Roth. (Stanford University) and Larry Samuelson (Yale University).

The members of REM have a diverse international background. They hold PhD degrees from the University of Cambridge, University of Bristol, University of Warwick (UK), Univ. Catholique de Louvain (Belgium), University of Padova (Italy), Stockholm School of Economics (Sweden) and NYU (USA). They collaborate with researchers from internationally recognised Universities, among them the Norwegian Business School, the University of Oslo (Norway), the University of Nottingham, the University of Essex, and the University of Sussex (UK).

REM has a very clear national recognition. The R&D Unit hosts the Portuguese Economic Journal. They also generate impact on macroeconomic policy through a very close collaboration with the Banco de Portugal. REM staff participates in editorial boards of journals like Spatial Research and Planning and Regional Studies, Regional Science, Portuguese Economic Journal, ASTIN Bulletin, Insurance: Mathematics and Economics, and European Actuarial Journal.

REM has a selective admission policy and the funding is distributed accordingly to research merits and needs of the members. However the Centre does not have a mechanism of exit in case a member becomes inactive in the research. Introduction of such practice would improve the outlook of the Centre and make active contributors more visible. It will also improve transparency and accountability of the active researchers.

The objectives of the Centre are very appropriate. The Centre plans to maintain and improve the quality of research, including the quality of publications and to continue providing consultancy to the public sector. The planned extension of the research in the area of behavioural economics looks very promising. The other areas of strong comparative advantages are theoretical econometrics and statistics. The Centre plans to continue working in a close collaboration with the Bank of Portugal and the ECB.

FCT is the main source of funding for REM. Funding from other sources should be expanded. Among the avenues to consider can be the development of the international MSc program with competitive tuition fees.

The Panel would also like to encourage a more substantial course work for the PhD program in Economics to match the internationally accepted standards which assume the delivery of advanced core modules during two semesters of the first year.

In general the cooperation between theoretical mathematicians and economists can stimulate research of excellent quality. Such field as Econometrics, Risk management, Banking, Quantitative Finance, Microeconometrics and agent based Macroeconomics requires new and improved quantitative methodologies where Mathematical and Actuarial expertise is highly required. However, REM does not make full use of its advantages. We recommend a further integration between theory and applications. The research groups in actuarial science may consider a closer collaboration with the researchers from the Macro group, whose research interests are in the area of Finance and risk management. We hope that new office facilities will promote such collaboration.

We also would like to acknowledge a good practice of international seminar and conference organisations and the maintenance of tight collaboration between PhD researchers, postdocs and senior staff members. The Lisbon meetings in Game theory conference correspond to the highest international standards and should be maintained at this level.

We think that some structured approach may improve placement of the PhD students.

Further promotion of collaboration with other research institutions in Lisbon can be very productive as it will increase the number of options available for PhD students and can also achieve the economy of scale.

Further integration between research groups can be potentially very productive and raise REM's research output to a qualitatively even higher level.

We also recommend some improvement in the online presentation of the Centre as there are lots of broken links. This will improve the group visibility.

The PhD fellowships should be awarded to students who wish to conduct their research in the area of Econometrics, Microeconomics or Macroeconomics/Finance. This will strengthen REM's core research groups. The supervisory team should consist of the researchers with a proven track record of high quality publications.

The Junior Researcher should specialise in the area of Econometrics, Microeconomics or Macroeconomics/Finance. This will strengthen REM's core research groups.

According to the available budget the Panel decided that the first priorities should be given to the development and maintenance of the Behaviour Laboratory. We believe that this new and promising project can be used by all REM research groups. We also believe that the Behaviour lab may promote interdisciplinary research between some or all research lines. Therefore it will generate research synergies and promote further integration.