

Review Template

Recommended length: six to seven pages

REVIEW

By: Neven Valev, Senior Economist, The Global Economy Project and Adjunct professor, Georgia State University, Atlanta, GA, USA;
Associate Professor with tenure at GSU until 2012

Regarding: The application of the following candidate for habilitation as **ASSOCIATE PROFESSOR** according to the Bulgarian legislation at the American University in Bulgaria in Area of Higher Education *Social Science, Economic Science, and Law* in Professional Field 3.8 *Economics*. The procedure has been announced in the State Gazette issue 75, dated September 9, 2014.

Candidate: **Dr. Didar Erdinc, American University in Bulgaria**

I present the evaluation below in my capacity as a member of the Habilitation Jury appointed for the above mentioned procedure by a letter of the AUBG President dated November 6, 2014 and according to a Decision of AUBG dated August 19, 2014. This evaluation is based on the *Development of Academic Staff in the Republic of Bulgaria Act*, the Rules for its implementation, the internal AUBG rules, regulations, and policies, including the *Habilitation Procedure* and the habilitation procedure advertisement on the AUBG website.

Evaluation of the Candidate

*The evaluation is carried out according to the **Primary Indicators** and **Additional Indicators** included in the document **Guidelines for the Habilitation Jury**.*

I. Basis for Evaluation and general description of the publications and professional activities, submitted for consideration for this procedure

Please indicate on what information this evaluation is based - documents submitted by the Candidate, professional activities, publications, e.g.:

- monograph(s);
- articles in refereed journals specialized in the area;
- non-refereed publications;
- conference reports;
- other publications (*please specify*);
- citations (by publications in Bulgaria/abroad);
- reviews, recommendations, opinions for the candidate's works;
- projects (Bulgarian, international, project leader);
- professional memberships;
- theoretical and applied works;
- other activities (*please specify*).

II. Eligibility

1. Please fill it out the enclosed **Eligibility Checklist** (Enclosure 1) and submit together with your Review. It combines eligibility conditions set forth in the Law and the University regulations.
2. Please state your opinion with regard to the Candidate's eligibility.

Professor Erdinc satisfies the established requirements and is therefore eligible for promotion to the rank of Associate Professor.

III. Areas of Research of the Candidate. Evaluation of the Contributions of the Candidate.

1. Please describe the principal areas of the Candidate's research.

Most of Professor Erdinc's research is in the areas of monetary economics, banking, and foreign direct investment. She has also done some work on the role of culture in economic development.

2. Please fill out the enclosed **Additional Requirements list** (Enclosure 2) and submit it with your review. Include here a statement whether the Candidate's areas of research correspond to the specific requirements of the current procedure.

The above areas of research are mainstream subject areas in economics and fit the current procedure.

3. Please include evaluation of the monograph(s) as an individual subject of evaluation. For candidates for Associate Professor: include evaluation of publications other than the monograph, if submitted instead of or together with the monograph. (Evaluation according to Primary Indicators.)

Review of "The Impact of Cultural Diversity on Economic Growth and Convergence"

The manuscript contributes to the empirical literature on economic growth and income convergence that dates back to the original theoretical work of Robert Solow (1956). As typical in that literature, the analysis is based on a sample of countries for which the authors have data on the variables of interest for a sufficiently long time to be able to investigate dynamics across several decades.

The work horse of the empirical growth literature is an economic growth equation that has also been employed as the basis of analysis in this manuscript: current economic growth is

regressed on past rates of economic growth and two groups of independent variables: a set of variables of special interest, i.e. the cultural indices, and a set of control variables that are usually included in these types of analyses. The control variables include the current level of GDP per capita which captures the convergence of incomes across countries, i.e. the model tests whether higher levels of initial income are associated with slower subsequent rates of economic growth; education which is a measure of human capital and is expected to accelerate the rate of economic growth; foreign direct investment as share of GDP which is also expected to increase economic growth; trade openness which is included in the model on the grounds that more open economies are subject to greater international competition that, in turn, fosters economic growth; private credit as percent of GDP that proxies for the level of development of the financial system and is expected to lead to greater economic growth; and lagged rates of economic growth that account for the time dynamics associated with economic growth.

To this standard econometric set-up, the manuscript adds four indices that capture the cultural traits of countries. The indices are assumed invariant over time as the length of the sample period is too short to allow for any substantial changes in social attitudes and behavior. Also, the indices are considered exogenous to economic growth as social traits are deeply rooted and probably not influenced by relatively transitory economic developments.

The five variables of interest are Individualism that captures the extent to which a society is individual-centered as opposed to group-centered with the expectation that individual-centered societies should experience more rapid economic growth; Power Distance Index that measures the level of trust in the central authorities and the public's willingness to delegate and follow such authority: greater Power Distance Index is expected to lead to slower economic growth; Uncertainty Avoidance that measures peoples' attitude toward risk with greater risk aversion leading to less entrepreneurial activity (thus causing slower economic growth) while at the same time contributing to stronger risk-sharing and ameliorating institutions (thus potentially raising economic growth); Masculinity what captures society's tendency to value highly economic achievement and success, expecting such tendencies to lead to faster economic growth; and Long-Term Orientation that is expected to also lead to greater economic growth as citizens set and pursue longer-term goals that yield more stable institutions and greater productivity gains.

The empirical analysis is carried out using Generalized Method of Moments (GMM) dynamic panel techniques to confront potential issues of reverse causality. In other words, it is possible that economic growth has a direct causal effect on some of the dependent variables used to explain it. Therefore, the causal effect runs from economic growth to, say, foreign direct investment and not the other way around as the empirical model posits. Moreover, the lagged economic growth variables included in the model are endogenous by construction. In these circumstances, researchers have to implement instrumental variable estimation techniques using as instruments external variables that are correlated with the independent variable (e.g. FDI) but uncorrelated with the dependent variable (economic growth). Identifying such variables in macroeconomics, however, is close to impossible as all aggregate parameters of the economy are interrelated and influence each other. The GMM dynamic panel technique provide a solution to that problem as it allows researchers

to use as instruments the lagged values of the variables already used in the model. There are two equations – a first difference equation that uses lagged levels of the model variables as instrument and a levels equation that uses lagged differences of the model variables as instruments. The GMM systems estimator combines the two estimations into one overall set of results. That is the procedure implemented in the manuscript.

The manuscript introduces a series of estimation results with different specifications, i.e. with different combinations of independent variables. It employs annual data which gives more observations as well as period averages that reduce the number of observations but smooth away short-term changes in economic growth. The results show that culture does indeed have an effect on economic growth in the ways outlined earlier. The only hypothesis that was not validated is the positive effect of Long-term Orientation on economic growth where the estimates were not statistically significant, possibly due to the small number of countries available to use in the analysis.

Overall, the manuscript raises an important question that has deep roots in economics and has intrigued many researchers. It is a difficult question to answer as culture cannot be measured easily. Yet, it is worthwhile to make an effort and move our knowledge a step forward. Once polished, the manuscript could be of interest to a wide audience of researchers in the area of economic growth and development. To facilitate the development of the manuscript, I would like to give a few suggestions that the authors may take into account as they work on subsequent drafts.

1. Much of the introduction and the literature review draw inspiration from Weber's theory about the Protestant religion and its influence on industrialization. The manuscript, however, uses indices that go beyond that theory. Hence, the literature review could be brought closer to the empirical approach used later in the paper.
2. The culture indicators used in the manuscript are not routinely used in the economic growth literature and would be of interest to many researchers. It would therefore be useful to elaborate more on their construction, interpretation, country rankings and other descriptive statistics.
3. The manuscript could substantiate a bit more the claim that the results are not biased by a non-random selection of countries in the sample.
4. The empirical estimations assume that only FDI is endogenous but a similar argument can be made about other variables. For example, credit levels are routinely treated as endogenous in the finance and growth literature. Why not treat all independent variables (excluding the cultural indices) as endogenous? That seems like the strategy that is least open to the objections of potential referees.
5. In addition to the serial correlation test, GMM dynamic panel estimations always report the Hansen statistic for over identifying restrictions. It tells us whether we are using a valid set of instruments. In a typical paper using the procedure, care is taken to use as few instruments as possible and to report the Hansen test statistic as evidence of the solid selection of the lag structure of the set of instruments.

6. I am sure that the authors plan a few additional rounds of edits to iron out the language, to increase the flow between sections, and to format the tables and the overall manuscript.

4. *For candidates to Full Professor: include evaluation of other original research works, publications, and other theoretical or applied-theoretical works, which are evaluated in their entirety. (Evaluation according to Primary Indicators.)*

N/A

5. *Please include evaluation according to the Additional Indicators related to research, such as participation in research projects, delivered conference reports, professional memberships and other applicable professional activities.*

Professor Erdinc is clearly active in the profession. She has participated in the over 30 conferences and had been invited to give guest lectures and presentations on multiple occasions. She has applied and received grants and has served on the editorial boards of several academic journals.

6. *Please include a summary evaluation of the theoretical and applied results of the Candidate's research and the Candidate's theoretical and applied contributions.*

Professor Erdinc's research has been primarily empirical, using panel data (cross section, time series) to investigate a number of interesting questions. In fact, she has routinely used advanced panel techniques, namely, GMM (Generalized Method of Moments) Dynamic Panel techniques that can address issues of reverse causality in the data. That is a useful procedure as it allows the researcher to confront endogeneity problems without external instruments and to establish whether a particular variable, e.g. bank credit has a causal effect on, e.g. economic growth.

In terms of key results, Professor Erdinc's papers show that: 1) macroeconomic stability and strong institutions are instrumental in attracting foreign direct investment; 2) rapid credit growth is associated with an elevated risk of banking system instability; 3) remittances have a positive effect on consumption, investment, and overall economic growth; 4) the implementation of advanced risk management techniques leads to better bank performance in terms of a lower rate of non-performing loans; and 5) the lending channel of monetary policy in Bulgaria works, i.e. lower interest rates in the eurozone lead to greater bank lending in Bulgaria.

Some of these papers use Bulgarian data but quite a few of them use European or world level data which ensures a broad scope of interest. Besides the work I summarize



American University in Bulgaria

above, her publications record also includes work on culture and economic growth as described in detail above.

In short, Professor Erdinc's record is characterized by the use of advanced econometric techniques to answer important and interesting academic and policy questions. Moreover, she has a solid pipeline of working papers that I hope would turn into published papers over time and would strengthen even more the number and the quality of the citations of her work. Professor Erdinc is also active at conferences which can only help further build her publication record.

In terms of the number of papers, Professor Erdinc's publications in peer reviewed outlets are 11 which meets the unofficial guidelines of the requirements. Many of the publications are actually conference proceedings that I assume passed through a peer review process before publication.



American University in Bulgaria

IV. Evaluation of the Candidate's teaching

1. *Please include evaluation according to the Additional Indicators related to teaching, with emphasis on teaching in recognized liberal arts institutions and student-centered approach.*

Professor Erdinc is clearly a dedicated and effective teacher. She has taught a wide range of classes in her core and related fields including Macroeconomics, Open Economy Macroeconomics, Econometrics, Financial Markets and Institutions, Managerial Economics, Economics of Reform and Transition, Statistics, Microeconomics, Economic Development, and Economic History of Developed and Developing Countries.

The peer reviews on her teaching are exceptionally positive and consistent over time. She has received an "excellent" grade on each of her previous evaluations by the Faculty Evaluation Team. In addition, Professor Erdinc has served the university at both the undergraduate and the graduate levels through her involvement with the Executive MBA program.

The student evaluations are solid. I am particularly impressed with the consistently good evaluations from the econometrics classes that are not easy to teach. I also noticed that students mention the inclusion of math and theoretical rigor in her other classes which is an indication that Professor Erdinc provides a supportive, yet challenging class atmosphere.

2. *Please indicate your opinion as to whether the Candidate's areas of teaching correspond to the **Additional Requirements** (Enclosure 2) set forth by AUBG for this procedure.*

Professor Erdinc's areas of teaching are mainstream economics areas at any teaching or research institution with an economics major. In that sense, her teaching record and expertise fulfill the Additional Requirements.

3. *Please indicate your opinion with regard to the correspondence between the overall teaching experience of the Candidate and the specific requirements of the current procedure.*

Let me reiterate that Professor Erdinc's teaching has been consistently solid. She covers a wide range of topic areas equally well. Her teaching style appears to be forthcoming in terms of student needs and challenging at the same time which is a very good balance. Professor Erdinc is clearly an experienced and dedicated teacher.

V. Critical notes and recommendations

I don't have criticisms of Professor Erdinc's record. In terms of recommendations, I would suggest a greater emphasis on publishing in regular peer reviewed journals in addition to the conference proceedings. It would also be good to aim a bit higher and try to publish in higher ranked journals as papers in those journals are cited more widely.

V. Conclusion:

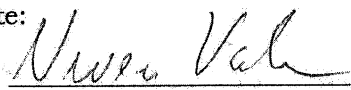
1. *Appropriateness to the specific requirements of the American University in Bulgaria*

Professor Erdinc meets the requirements for habilitation at the American University in Bulgaria in terms of teaching and research.

2. *Recommendation "for" or "against" habilitation*

I recommend that Professor Erdinc is habilitated as an Associate Professor of Economics.

Signature and date:


02/04/2015

By signing here I also declare that writing this review does not represent conflict of interest.

Additional Requirements

Additional specifications: Banking, credit, and monetary mechanisms, corporate culture, and FDI in emerging European economies; Economic development among religious or ethnic minority populations; Banking and financial crisis and macroeconomic uncertainty; Panel data econometrics.

Check below what applies. Sign and submit together with your review or opinion.

The Candidate has conducted research in the following areas:

- ### Teaching

The Candidate has teaching experience in the following areas:

- ☒ Theoretical and applied econometrics;
- ☒ Macroeconomics;
- ☒ Managerial economics;
- ☒ Open economy macroeconomics;
- ☒ Financial markets and institutions;
- ☒ Economics of transition and regional economic integration;
- ☒ Microeconomics;
- ☒ Industrial organization;
- ☒ International finance.

Signature and date:

e: *N. M. Val* 01/16/2015

American University in Bulgaria

Eligibility Checklist

Name of the Candidate: **Didar Erdinc**

Applying for habilitation as: **Associate Professor at the American University in Bulgaria according to announcement in State Gazette, issue № 75, dated 9 September 2014**

In the Professional Field: **3.8 Economics**

Check below what applies. Sign and submit together with your review or opinion.

- ☒ The Candidate has Ph.D;
- ☒ The Candidate has served five years as (Senior) Assistant Professor at a recognized academic institution;
- ☒ The Candidate has published a monograph or publications of equal standing in specialized journals. These should not repeat publications based on which previous degrees or ranks have been granted;
- ☒ The Candidate has experience from recognized academic liberal arts institution(s);
- ☒ The Candidate has experience in student-centered teaching approach;
- ☒ The Candidate has undergone at least one successful evaluation in teaching, research and service at a recognized academic liberal arts institution, including positive student evaluations of teaching.
- ☒ The Candidate has experience in teaching in English at a higher education institution with instruction in English language.
- ☒ AUBG can ensure teaching and research load according to its internal rules and regulations.

Signature and date:

Diwan Vel 01/16/2015