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# Federal Democratic Republic of Ethiopia Ethiopian Civil Service University Addis Ababa - Ethiopia

College of Finance, Management and Development College of Urban Development and Engineering College of Leadership and Governance ECSU

# Subject: Establishment of Statistical Advisory Service (SAS) at the ECSU

The University Graduate Council, in its meeting held on Wednesday, 21<sup>st</sup> November 2018 has agreed on the necessity of establishing a Statistical Advisory Service as one strategic instrument to improve the analytical rigor of research carried in post graduate studies and by staff members. The Graduate Council has appointed the following as members of the Statistical Advisory Service:

- 1. Dr. Emanuel Gebreyohannes (Associate Professor)- Chief Coordinator;
- 2. Prof. Dr. Gollagri Rama Kirishna- Member;
- 3. Dr. Amsalu Bedemo (Associate Professor)- Member; and
- 4. Dr. Zerihun Doda (Assistant Professor)- Member.

In addition to the privileges stated in the establishment guideline, the University will soon set the benefits that the members of the Service could be entitled for the invaluable service they render. The School of Graduate Studies is expected to facilitate and publicize the services to all potential customers. We hereby attach eight pages of the establishment guideline.

Regards,

Academic Vice President

- Office of the President
- > Academic Program Office
- School of Graduate Studies
- Dr. Emanuel Gebreyohannes
- Prof. Dr. Gollagri Rama Kirishna
- Dr. Amsalu Bedemo
- Dr. Zerihun Doda ECSU



# Establishment of Statistical Advisory Service at the Ethiopian Civil Service University

#### 1. Introduction

Statistical advisory service is a common support service in graduate studies which has been practiced in higher education institutes of many countries. Specifically with the shortage of capacity in rigorous analytical skill among some of post graduate students here in the Ethiopian Civil Service University, it is imperative to establish such an advisory service.

Statistical assistance is primarily provided for staff researchers and graduate studies (PhD and masters degrees by research) and shouldn't be taken to replace the role of advisors and supervisors. The Advisors and supervisors are primarily responsible for giving guidance for their respective students on the appropriate conceptual, theoretical framework and research methods and techniques. Support given by statistical advisors is only supplementary to guidance and help given by their overseers. Some statistical analyses might require extensive computation. Students might be unable to do these computations themselves without help. Advising services for such extensive works might take the advising beyond the four-hour, free-service limit as mentioned here under.

Even advisors and supervisors can seek additional assistance related to more complex statistical analyses, econometrics and modeling including simulation on behalf of their students/assistants. The envisaged Statistical Advisory Service is very much helpful in this regard and instrumental in transforming the ECSU into a research university. The assistance provided by the statistical advisory service includes among others, advice on:

- Development of theoretical and/or analytical frameworks
- Planning of experiments
- Designing questionnaires
- Statistical analysis
- Econometrics
- Modeling, and
- Simulation
- Computer assisted advanced qualitative analysis



# 2. Background

The growing complexity of science itself has become a key issue. With ever growing complexity of development challenges in the 21<sup>st</sup> century, today it is more about accepting uncertainty, unpredictability, and non-linearity. The *growing complexity implies stronger interdisciplinary approaches and rigorous analytical capability in research and education.* No single disciplinary focus or a single researcher can be sufficient to deal with such challenges. It requires proficiency in a great number of methodological approaches, interdisciplinary perspective and analytical rigor in research work.

With this view the ECSU since three years ago has planned to establish an Urban Lab. Procurement of equipment is already on progress. The urban lab is a cross disciplinary center envisaged to provide facility for Statistics (including spatial statistics), econometrics, modeling and simulation in digital environment, scenario building and comparative analysis. The urban lab will be furnished with not only hard ware such as high capacity computers, and high quality output equipment, but also with the state of the art data analysis software, geo spatial and socio-economic data. Most importantly it will serve as facility cluster for statistical advisory service run by high level statistician, econometrician and GIS experts.

The urban lab also functions as center for open source and commercial spatial data. It is committed to interdisciplinary, practical orientation and internationalization. Among the objectives of establishing the urban lab include:

- To help researchers and practitioners to get hands on experience on how to process data for making an informed planning decision and carryout urban development operations.
- To develop modeling, simulation and scenarios for experimental analysis to understand how cities work and produce persuasive evidence about what matters for cities most.

# 3. Services to be furnished by the statistical advisory service

- **3.1.** Advise and support PhD students in the use of statistical tools, modeling, and software while developing their dissertation.
- **3.2.** Assess capacity gaps on hands-on use of statistical software and modeling skills of graduate students and recommend on capacity building measures to the School of Graduate Studies.

- 3.3. Plan, organize and execute training for graduate students in collaboration with other faculty members as coordinated by SGS.
- **3.4.** Develop and compile handbooks/operational manuals in the use of statistical software and modeling to facilitate the dissertation/thesis development by graduate students.
- **3.5.** Liaison with the Urban Laboratory facility management under the College of Urban Development and Engineering and assist graduate students in statistical analysis, simulation and modeling exercises.
- 3.6. Assist public sector capacity building related research projects for which the university has engaged as contractual partner.
- 3.7. Give statistical advice for external public and private sector customers on survey design and analysis according to the rules and contractual agreements of the university.
- 3.8. Assist mixed research and qualitative research on computer –assisted advanced qualitative analysis
- 3.9. Prepare and administer computer based on-line Research Aptitude Test (RAT) to assess the research capability of master's students when requested by the AVP.

# 4. Working procedures

- 4.1. An appointment is necessary due to the continuing demands for consulting/advisory time.
- 4.2. Booking for appointment is carried by filling customer information form and send it by e-mail via: sas@ecsu.edu.et. An appointment for consultation will be fixed and sent to user via e-mail address of the client.
- 4.3. For advisory/consultancy services for graduate students or research assistants under supervision, their supervisors or project managers are strongly encouraged to participate in meetings along their students/subordinates.
- 4.4. The student's supervisor must consent to the involvement of the Advisory Service and must be kept informed about the statistical advisor's advice.
- 4.5. PhD students and staff researchers are encouraged to consult early in the formulation of a research project so that data are specified and collected in a format that is both manageable and conducive to the appropriate analysis
- 4.6. If one-to-one statistical consultation is not possible for masters' theses writing students the Advisory Service can arrange and provide a series of learning/training in large groups.
- 4.7. Non-thesis masters or students with minor research components or if those projects are part of a standard component of course work load such as assignments in a research methods and techniques class, are not eligible for statistical advisory service.

4.8. The SAS will document the visit to the Service. The documentation will give a brief outline of the project and state the nature of the consultation and the effective time elapsed for the single session of consultation. The documentation will provide a space for the supervisor's consent to be formally given.

# 5. Working principles

- 5.1. Requests from staff researchers and PhD students are treated with high priority.
- 5.2. Supervisors of masters' students and their respective advisees may have to be placed in a waiting list.
- 5.3. The statistical consultant or advisor will not write dissertations/reports on behalf of the researcher.
- 5.4. Ad hoc statistical advice over the telephone will not be provided. Seeking a quick answer to statistical questions may mask a complex research problem that requires a consultation to talk over all the statistical and research considerations involved.
- 5.5. Depending on the level of statistical advisor involvement, support provided by statistical consultant/advisor should be recognized by researchers in acknowledgement or co-authorship. If the advisor statistician contributes essential research ideas of value to the project, then it is expected that the statistician will operate more in the mode of a collaborative researcher, as part of a team with the student/staff researcher and his/her supervisor. In this case an acknowledgment of the statistician advisor must be recognized in the publication.
- 5.6. If the advisor statistician is merely providing help in applying standard statistical procedures to ideas, which have been properly formulated by the student or staff researcher, no publication credit is expected by the consultant and is also treated as a free service. However such acknowledgement shall not make the statistician advisor responsible for all statistical content of the paper, when perhaps he/she has given advice on one small procedure. Therefore in such circumstances the specific help received should be mentioned.
- 5.7. External users can also seek advice from the advisory service upon payment rate fixed by the University.
- 5.8. Comparing the number of graduate dissertation/ thesis writers and the available resources, it is necessary to set a limit on time to be spent on providing free advice. Therefore an advisory session is limited to 30-45 minutes and a total of consultation hours exceeding four hours in different rounds must be on paid basis on a rate fixed by the University. However in order to be effective, the statistician might need to advise if/he/she is involved in an on-going way. In this

- context, it will be essential for the advisor, the student and the supervisor to discuss the basis of any continuing work.
- 5.9. Fair payment for services might be entertained in the future even for internal users.
- 5.10. The Statistician Advisor would be allocated additional work load for the advisory service he/she renders in addition to teaching and other work loads.
- 5.11. Depending on the nature of the advising sought, the following points should be borne in mind:
  - 1. From experience, there is an estimate of only 20-30% of the data analysis exercise might fit into the framework of the standard text book situations. Most analyses involve innovative work by the statistician to devise the correct method, or indeed the correct conceptual framework.
  - 2. In many studies the statistician might not be able to offer good advice in a short time. She/he might need familiarization with the subject matter of the student's field and may also need to explore the data extensively in order to offer good advice at all.
  - 3. Often the statistician can only offer good advice if she/he is involved in an ongoing way.

#### 6. Premises

The Statistical Advisory Service will be situated in the premises of the School of Graduate Studies Building nearby the urban Lab Facility Center. Until permanent consultation rooms are made available, the office of the coordinator of the SAS is considered as the office of the SAS.

#### 7. Statistical advisors

The Statistical Advisory Service is managed by a core team of four senior and competent researchers, statisticians, and econometricians. The service is supported also by other staff members, drawing on their individual research strengths and expertise to help staff researchers, PhD students, and other thesis writers in graduate studies. Post graduate students also provide a valuable contribution in the form of peer-to-peer support for other graduate students across ECSU.





# Dr. Emmanuel GebreYohannes (Asso. Prof.), Chief coordinator of SAS

Dr. Emanuel has BSc degree in Mathematics, M.Sc. in Statistics, PhD in Statistics (Econometrics), from Institute of Mathematical Methods in Economics, Research Unit: Econometrics & Systems Theory, Technical University of Vienna, Austria. Dr Emanuel has published more than 12 articles as author and co-author. He has led and participated on more than 7 surveys, statistical and econometrics analysis in which reputable local and international organizations are involved.



Prof. Dr. Gollahagri Rama Krishina

Professor Rama has Masters of Arts, M.Phil and Ph.D. in Economics. Professor Rama has more than 31 years of teaching as professor, and 10 years as professor and associate professor in the Ethiopian Civil Service University. He has served as visiting professor in several business schools in India. Professor Rama has rich knowledge of quantitative as well as qualitative research, various analytical software and very wide experience in advising PhD students here in Ethiopia and India.

# Dr Zerihun Doda (Asst. Prof.)

Dr Zerihun Doda obtained his Ph.D. degree from the University of Kent (United Kingdom) in anthropology and conservation. His MA degree is in anthropology and BA degree in sociology and social administration from Addis Ababa University. He had been faculty

member of Hawassa University. He has over 22 years teaching experience. He has conducted sociological, social anthropological and interdisciplinary research. His research area and interest include ethnographic survey and ethno historical research; studies of identity, livelihoods, nature - culture nexus, social policy, development, social impacts of development projects, disadvantaged social groups and local communities, environment, society and climate change among others. As an educator he has published two teaching materials in sociology and anthropology which has been used as teaching materials in universities across Ethiopia.

Dr Zerihun Doda has conducted trainings in computer assisted qualitative data analysis software (CAQDAS) having expertise in Nvivo (versions 10 & 11) MAXQDA (versions 10 & 12) ATLAS .ti versions 7.5 and Quirkos (versioins 2.0), reference management software (such as Zotero, Mendeley, Qiqqa and ENDNOTE), plagiarism detection software (Plagiarism checker X Pro and Plagiarism Detector Pro). He has provided training in qualitative and mixed methods research with CAQDAS support (Nvivo 10) for the staff of ECSU in two rounds in the year 2017. He has recently introduced the application of plagiarism detection software helpful to review research proposals at the ECSU.



#### Dr Amsalu Bedemo (Asso. Prof.)

Dr. Amsalu Bedemo is associate professor of Economics at School of Policy Studies in ECSU. He has BA and MA Degrees in Economics, PhD in Agricultural Economics from Haromaya University. Dr. Amsalu has many years of experience in teaching, research, student advising as well as academic administration. He has published more than 10 articles as author and co-author, which were conducted by using different econometric techniques and models. He offered courses on Advanced Macroeconomics, Advanced Econometrics: Theory and Application and Research and Evaluation Methods for masters' students in Development Economics and Agricultural Economics at different universities. Dr. Amsalu has advised and has also examined masters' thesis of many students from the field of Development Economics and Agricultural Economics. He has good professional skills in the application and demonstration of Econometric models using software such as STATA for cross-sectional and time series analysis.





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# Statistical Advisory Service (SAS)

# **Customer Information Form**

CollegeDepartment	Program
	te/ Masters' studentID No
Name of the lead researcher / Supervisor	r/
Date of request:	nark in the respective left hand side box)
Assistance requested (please put tick	mark in the respective left hand side box)
Development of theoretical/analytical frame	work Econometrics
Planning of experiments	Modeling
Designing questionnaires	Simulation
Statistical analysis	Computer assisted advanced qualitative
	analysis
Give details:	
Applicant signature cou	ntersigned by main supervisor or lead research
	Date
	Date
For Office use only:	
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Approximate al producio in an electric	Aires and a shaire and
Appointed advising date:	time: assigned advisor
Advising Rounds:	
1   Time :   2   Time :   3   Time :   4   Tim	: 5 Time: 6 Time: 7 Time 8 Time
Next round appointed (Date)	Time:
Signature of Chief coordinator:	

