# IPSA Online Summer School on Research Methods, Antalya 2021

# “Introduction to Regression Analysis”

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**Course Topics:** New technologies, internet, and social media have all contributed to availability of ever-increased varieties of data in recent decades, which have also made quantitative data analysis the more relevant at a global level. This course is designed for researchers, who are eager to understand the basics of quantitative data analysis, yet who have had no significant experience in this field before. The objective of the course is twofold. The first objective is to introduce its participants the quantitative logic. For this purpose, the course will first cover topics such as variables and hypothesis, conceptualization/operationalization, levels of measurement as well as descriptive statistics. The second objective is to encourage participants to conduct their first quantitative analysis. For this purpose, the course will cover topics such as the statistical inference, tests of significance, correlation and regression analysis.

The course will utilize STATA as the statistical software. Each lecture will be supplemented by STATA lab sessions. These sessions will be hands-on sessions. Students will have the opportunity to practice the course topics by using different social science data. They are also welcomed to bring their own research data and receive feedback on their analysis.

**Schedule:**

Morning sessions are for lectures, the afternoon sessions are for discussions and introduction to the software. Assigned readings should be done *before* the respective session.

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| Date, Time | | Topics | Assigned Reading |
| Aug. 30, 2021 | Morning  Session | Quantitative Research Design Deductive logic | Variables and hypothesis | Units of measurement | Time dimension | Conceptualization and Operationalization | Babbie, Ch.4-5;  Pollock, Ch.1-2 |
| Afternoon Session | Practice Session 1  Introduction to STATA | Introduction to Social Science Data| Constructing variables| Frequency tables | Our World in Data  WVS  ISSP |
| Aug. 31, 2021 | Morning  Session | Descriptive statistics Framing Hypothesis | Cross-tabulations and mean comparisons | Distributions | Central tendency | Dispersion | Charts and Tables | Babbie, Ch.14  Pollock, Ch.3 |
| Afternoon Session | Practice Session 2  STATA Practice for Cross-tabulations | Mean comparisons| Charts & Tables |  |
| Sept. 1, 2021 | Morning  Session | Foundations of Statistical Inference & Tests of significance Parameters and statistics| Random sampling | Standard error | Inference using the Normal distribution| Inference using the Student’s t-Distribution | Statistical significance | Babbie, Ch. 7;  Pollock, Ch.6-7 |
| Afternoon Session | Practice Session 3  STATA practice for ANOVA | t-test | Chi-square test |  |
| Sept. 2, 2021 | Morning  Session | Correlation and regression: Correlation | Bivariate regression |Multiple regression | Pollock, Ch.8 |
| Afternoon Session | Practice Session 4  STATA practice for Correlation and regression analyses |  |
| Sept. 3, 2021 | Morning  Session | Logistic regression and review: Logistic regression| Summary & Course Reflection | | Pollock, Ch.8 |
| Afternoon Session | Practice Session 5  STATA practice for Logistic regression |  |

**Course books:**

Babbie, Earl. (2014). The Basics of Social Research( 6th edition). Wadsworth, Cengage Learning.

Philip H. Pollock III (2012). The Essentials of Political Analysis, Sage Publications (Newer editions of this book are also available).

**Selected Empirical Works in Political Science**

On methods:

Achen, Chris. 2005. “Let’s Put Garbage Can Regressions and Garbage Can Probits Where They

Belong.” Conflict Management and Peace Science, 327-339.

Adcock, Robert and David Collier. 2001. "Measurement Validity: A Shared Standard for Qualitative

and Quantitative Research." American Political Science Review 95, 3, 529-47.

Brady, Henry & Collier, David, eds. 2000. Rethinking Social Inquiry: Diverse Tools, Shared

Standards. Berkeley, CA: Rowman & Littlefield Publishers.

King, G., Keohane, R. and Verba, S. (1994) Designing Social Inquiry: Scientific Inference in Qualitative Research. New Jersey: Princeton University Press

Mahoney, James and Gary Goertz. 2006. “A Tale of Two Cultures: Contrasting Quantitative and

Qualitative Research.” Political Analysis 14: 227-249.

Others

Howard, Marc Morje. (2003). The Weakness of Civil Society in Post-Communist Europe. Cambridge University Press.

Inglehart, R. (1997) Modernization & Post-modernization: Cultural, economic and political change in 43 societies, Princeton University Press.

Przeworski, Adam & Limongi,Fernando (1997). “Modernization: Theories and Facts.” World Politics 49, no.2, 155-183.

Putnam, Robert, Nanetti, Rafealla, and Leonardi, Robert. (1993) Making Democracy Work: Civic Traditions in Modern Italy. Princeton, New Jersey: Princeton University Press.

Verba, Sidney and Almond, Gabriel. 1963. The civic culture. Sage

Important web sources for social science data

World Values Survey (WVS) Database, <http://www.worldvaluessurvey.org/wvs.jsp>

International Social Survey Program, <http://www.issp.org/>

Our World in Data <https://ourworldindata.org/>