

## Agriculture Advanced Level Project Papers From Zimsec

This new, fully revised edition aims to serve as a guide for agricultural research scientists and other practitioners in writing papers for publication. It also looks to provide a resource manual for training courses in scientific writing. There are three new chapters on reporting statistical results, communicating science to non-scientific audiences and electronic publishing. In addition, the original chapters have all been rewritten to reflect current developments and to make the content more complete and easily comprehensible.

The volume examines the state-of-the-art of productivity and efficiency analysis. It brings together a selection of the best papers from the 10th North American Productivity Workshop. By analyzing world-wide perspectives on challenges that local economies and institutions may face when changes in productivity are observed, readers can quickly assess the impact of productivity measurement, productivity growth, dynamics of productivity change, measures of labor productivity, measures of technical efficiency in different sectors, frontier analysis, measures of performance, industry instability and spillover effects. The contributions in this volume focus on the theory and application of economics, econometrics, statistics, management science and operational research related to problems in the areas of productivity and efficiency measurement. Popular techniques and methodologies including stochastic frontier analysis and data envelopment analysis are represented. Chapters also cover broader issues related to measuring, understanding, incentivizing and improving the productivity and performance of firms, public services, and industries.

When designing and evaluating policies and projects for women's empowerment, appropriate indicators are needed. This paper reports on the lessons learned from two rounds of pretesting and cognitive testing of the project-level Women's Empowerment in Agriculture Index (pro-WEAI) in a total of five States/Regions in Myanmar. We assess if respondents understand the modules as intended and which questions require modification based on the cultural context. We find that the questions also present in the abbreviated WEAI are generally well understood, particularly on instrumental and group agency. The challenge to respond to hypothetical and abstract questions did become apparent in the domains representing intrinsic agency, and was problematic for questions on autonomy and self-efficacy. Also, the internationally validated questions on attitudes towards domestic violence were too abstract, and responses depend on the scenario envisioned. We also suggest including an adapted version of the module on speaking up in public, to reinforce the domain on collective agency. Our findings provide an encouraging message to those aspiring to use pro-WEAI, but emphasize the need for continued attention for context-specific adjustments and critical testing of even those instruments that are widely used and deemed validated.

This Handbook offers an up-to-date collection of research on agricultural economics. Drawing together scholarship from

experts at the top of their profession and from around the world, this collection provides new insights into the area of agricultural economics. The Routledge Handbook of Agricultural Economics explores a broad variety of topics including welfare economics, econometrics, agribusiness, and consumer economics. This wide range reflects the way in which agricultural economics encompasses a large sector of any economy, and the chapters present both an introduction to the subjects as well as the methodology, statistical background, and operations research techniques needed to solve practical economic problems. In addition, food economics is given a special focus in the Handbook due to the recent emphasis on health and feeding the world population a quality diet. Furthermore, through examining these diverse topics, the authors seek to provide some indication of the direction of research in these areas and where future research endeavors may be productive. Acting as a comprehensive, up-to-date, and definitive work of reference, this Handbook will be of use to researchers, faculty, and graduate students looking to deepen their understanding of agricultural economics, agribusiness, and applied economics, and the interrelationship of those areas.

Contains Administrative report only.

In this paper, the authors describe the adaptation and validation of a project-level WEAI (or pro-WEAI) that agricultural development projects can use to identify key areas of women's (and men's) disempowerment, design appropriate strategies to address identified deficiencies, and monitor project outcomes related to women's empowerment. The 12 pro-WEAI indicators are mapped to three domains: intrinsic agency (power within), instrumental agency (power to), and collective agency (power with). A gender parity index compares the empowerment scores of men and women in the same household. The authors describe the development of pro-WEAI, including: (1) pro-WEAI's distinctiveness from other versions of the WEAI; (2) the process of piloting pro-WEAI in 13 agricultural development projects during the Gender, Agriculture, and Assets Project, phase 2 (GAAP2); (3) analysis of quantitative data from the GAAP2 projects, including intrahousehold patterns of empowerment; and (4) a summary of the findings from the qualitative work exploring concepts of women's empowerment in the project sites. The paper concludes with a discussion of lessons learned from pro-WEAI and possibilities for further development of empowerment metrics.

Building on the work of earlier studies that looked at trends in and returns to federal public expenditures on agriculture in Nigeria, this paper explores spending patterns at the sub-national state level over a nine-year period, as well as trends in agricultural and economic performance and indicators of household welfare. Our examination focuses on two groupings of states – the full 37 state units of Nigeria (the 36 states, plus the Federal Capital Territory, Abuja); and the seven states that are the focus in Nigeria of the Global Food Security Strategy (GFSS) of the United States Agency for International Development. Sub-national agricultural spending as a share of aggregate agricultural spending in Nigeria is large, given the stronger role for sub-national governments in agriculture than is the case in other sectors. However, we find that the share of state-level expenditures on agriculture as a share of aggregate state-level expenditures is still relatively low, an average of 3.86 percent over the period 2007 to 2015. While the

prioritization of agriculture spending varies greatly year by year, the variation over time does not have a discernible long-run upwards or downwards trend. We also find that agricultural expenditures are more capital intensive than are overall public expenditures at state level, but that capital expenditures as a share of total agriculture spending has decline over the last decade, as is the case overall in Nigeria's industrial sectors. We conclude that efforts to strengthen state-level agricultural spending in Nigeria merits greater attention, while putting in place measures to ensure improved effectiveness in any such spending.

This book constitutes the thoroughly refereed post-conference proceedings of the Third IFIP TC 12 International Conference on Computer and Computing Technologies in Agriculture, CCTA 2009, held in Beijing, China, in October 2009. The 80 revised papers were carefully selected from numerous submissions. The papers cover a wide range of interesting theories and applications of information technology in agriculture, including simulation models and decision-support systems for agricultural production, agricultural product quality testing, traceability and e-commerce technology, the application of information and communication technology in agriculture and universal information service technology, and service systems development in rural areas.

For nearly a century, scientific advances have fueled progress in U.S. agriculture to enable American producers to deliver safe and abundant food domestically and provide a trade surplus in bulk and high-value agricultural commodities and foods. Today, the U.S. food and agricultural enterprise faces formidable challenges that will test its long-term sustainability, competitiveness, and resilience. On its current path, future productivity in the U.S. agricultural system is likely to come with trade-offs. The success of agriculture is tied to natural systems, and these systems are showing signs of stress, even more so with the change in climate. More than a third of the food produced is unconsumed, an unacceptable loss of food and nutrients at a time of heightened global food demand. Increased food animal production to meet greater demand will generate more greenhouse gas emissions and excess animal waste. The U.S. food supply is generally secure, but is not immune to the costly and deadly shocks of continuing outbreaks of food-borne illness or to the constant threat of pests and pathogens to crops, livestock, and poultry. U.S. farmers and producers are at the front lines and will need more tools to manage the pressures they face. Science Breakthroughs to Advance Food and Agricultural Research by 2030 identifies innovative, emerging scientific advances for making the U.S. food and agricultural system more efficient, resilient, and sustainable. This report explores the availability of relatively new scientific developments across all disciplines that could accelerate progress toward these goals. It identifies the most promising scientific breakthroughs that could have the greatest positive impact on food and agriculture, and that are possible to achieve in the next decade (by 2030).

This book is the outcome of more than 20 years of experience of the author in teaching and research field. The wider scope and coverage of the book will help not only the students/ researchers/professionals in the field of agriculture and

allied disciplines, but also the researchers and practitioners in other fields. Written in simple and lucid language, the book would appeal to all those who are meant to be benefitted out of it. All efforts have been made to present "RESEARCH", its meaning, intention and usefulness. The book reflects current methodological techniques used in interdisciplinary research, as illustrated with many relevant worked out examples. Designing of research programme, selection of variables, collection of data and their analysis to interpret the data are discussed extensively. Statistical tools are complemented with real-life examples, making the otherwise complicated subject like statistics seem simpler. Attempts have been made to demonstrate how a user can solve the problems using simple computer-oriented programme. Emphasis is placed not only on solving the problems in various fields but also on drawing inferences from the problems. The importance of instruments and computers in research processes and statistical analyses along with their misuse/incorrect use is also discussed to make the user aware about the correct use of specific technique. In all the chapters, theories are combined with examples, and steps are enumerated to follow the correct use of the available packages like MSEXCELL, SPSS, SPAR1, SAS etc. Utmost care has been taken to present varied range of research problems along with their solutions in agriculture and allied fields which would be of immense use to readers.

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