



# **Georgia State University/Cairo University Collaborative Partnership “Egypt: Enhancing Capacity for Research in Economics”**

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## Contents

<b>EXECUTIVE SUMMARY .....</b>	<b>3</b>
<b>PARTNERSHIP ACHIEVEMENTS .....</b>	<b>5</b>
RESULTS AND PERFORMANCE.....	5
EFFECTS ON INSTITUTIONAL SYSTEMS.....	11
OVERALL CHANGE.....	11
<b>SHARING LEARNING .....</b>	<b>12</b>
CHALLENGES AND SOLUTIONS.....	12
LESSONS LEARNED AND BEST PRACTICES .....	14
PARTNERSHIP SUSTAINABILITY AND STRATEGIC IMPACT ASSESSMENT .....	15
<b>SUSTAINABILITY .....</b>	<b>16</b>
STEPS TAKEN TOWARD SUSTAINABILITY .....	16
FACTORS THAT MAY INFLUENCE SUSTAINABILITY.....	18
OVERALL PROSPECTS OF SUSTAINABILITY .....	18
<b>APPENDICES .....</b>	<b>20</b>
APPENDIX A: PARTNERSHIP FINAL REPORT AND APPENDICES	
APPENDIX B: EXTERNAL SUSTAINABILITY AND STRATEGIC IMPACT ASSESSMENT	
APPENDIX C: FEPS WEBSITE HOMEPAGE & DEANS' WELCOME	
APPENDIX D: FEPS WEBSITE PRESS RELEASE ON CLOSING CONFERENCE	

## EXECUTIVE SUMMARY

Identifying the substantial need for high-quality economics research for a variety of stakeholders in and outside Egypt, USAID/Egypt initiated an Associate Cooperative Agreement with the American Council on Education (ACE)/Higher Education for Development (HED) in 2008. As Egypt’s premier public higher education institution, Cairo University (CU) provides economic education and research through the Faculty of Economics and Political Sciences’ Department of Economics (DOE-FEPS), and was pre-selected by USAID/Egypt as the host-country partner for this higher education capacity-strengthening effort. Established in 1960, the CU DOE-FEPS provides a foundation for economics education and service as a national resource in economics research and is widely recognized for the success of its graduates and its research productivity. Through a needs assessment, it was determined that DOE-FEPS leadership sought to bolster its national and international reputation in economics education and research by increasing the quality and quantity of economics research, resulting in publications by its faculty and upgrading the graduate-level curriculum.

In collaboration with USAID/Egypt and USAID’s Bureau of Economic Growth, Agriculture and Trade (USAID/EGAT), Higher Education for Development (HED) issued a Request for Applications (RFA) on February 28, 2008 with a deadline of June 9, 2008. Following a review of the proposals by an expert peer review panel, which included a representative from USAID/Egypt, and Mission concurrence, HED made an award of \$399,525 to Georgia State University (GSU) in September 2008 for the three-year partnership project titled: “Egypt: Enhancing Capacity for Research in Economics.” The agreement between HED/American Council on Education and GSU was executed as a subaward of the Associate Cooperative Agreement (No. EDH-A-00-08-00013-00) under HED’s Leader Cooperative Agreement with USAID (AEG-A-00-05-00007-00) in September 2008 and GSU commenced activities with CU in October 2008.

The purpose of the partnership between GSU’s Andrew Young School of Policy Studies (AYSPS) and Cairo University’s Department of Economics, Faculty of Economics and Political Sciences (DOE-FEPS) was to expand the capacity of the faculty in economics research and to strengthen CU’s ability to serve as a regional hub for teaching, research, and service in economics and economic policy development. With the overarching goal of establishing the DOE-FEPS as a regional “center of excellence” for economics education and policy-related research, partners worked toward several objectives to enhance the quality of economics teaching and research and serve a variety of stakeholders.

The five objectives of the partnership were as follows:

***Objective 1: Strengthen the academic capacity of DOE-FEPS;***

***Objective 2: Strengthen the outreach capacity of DOE-FEPS;***

***Objective 3: Strengthen the applied research capacity of DOE-FEPS to engage in the support of better informed decisions and policy making;***

***Objective 4: Create an international network of experts to support Egypt’s public policy reform; and***

***Objective 5: Integrate appropriate information technology and distance learning techniques into the academic and outreach components of the partnership.***

Partners have worked toward the achievement of these objectives through a variety of human, institutional, and outreach capacity-building approaches, explained in detail in the section “Partnership Achievements.”

Major results of the partnership included the development of human capacity of FEPS faculty members through participation in short-term trainings on a variety of pertinent economic issues, joint research teams with GSU faculty, presentations of research, completion of one FEPS junior faculty member’s graduate course of study in Public Policy, and FEPS faculty academic exchange visits to GSU. In addition, the partnership contributed to institutional capacity for economics research through the provision of STATA statistical software and training regarding the use of STATA, development of a laboratory for experimental economics research, curricular revisions to upgrade course syllabi, and the development of a protocol for ethical research. Finally, a series of research seminars and collaboration on the design of a new and improved FEPS website contributed to enhanced outreach capacity.

The Egyptian revolution and subsequent political changes, changes in leadership and priorities at FEPS, visa acquisition, and logistical coordination all posed significant challenges for the partners to navigate. With perseverance and flexibility, the partnership was able to overcome these challenges and accomplish significant results. While the revolution has caused significant turmoil to CU, it has also had the unanticipated effect of increasing interest in the partnership from within FEPS, and enhanced the potential for its impact from without.

This partnership predates HED’s enhanced results-based management approach, which requires partners to clearly articulate a results framework with a theory of change, partnership monitoring plan, and partnership implementation plan, and to collect baseline data. Therefore, while partners tracked results and have reported consistently on USAID and HED standard higher education indicators, they did not have the opportunity to develop custom indicators to better communicate partnership results. Nor does HED have access to indicator-specific baseline data from which to draw quantitative conclusions regarding comparative results. The partnership administered qualitative surveys of faculty training participants, as well as collected trip reports from exchange visitors, from which partnership management decisions toward the improvement of future trainings were made.

In light of these monitoring limitations, and in preparation for the close of the partnership in August 2013, HED prepared a statement of work for a sustainability and

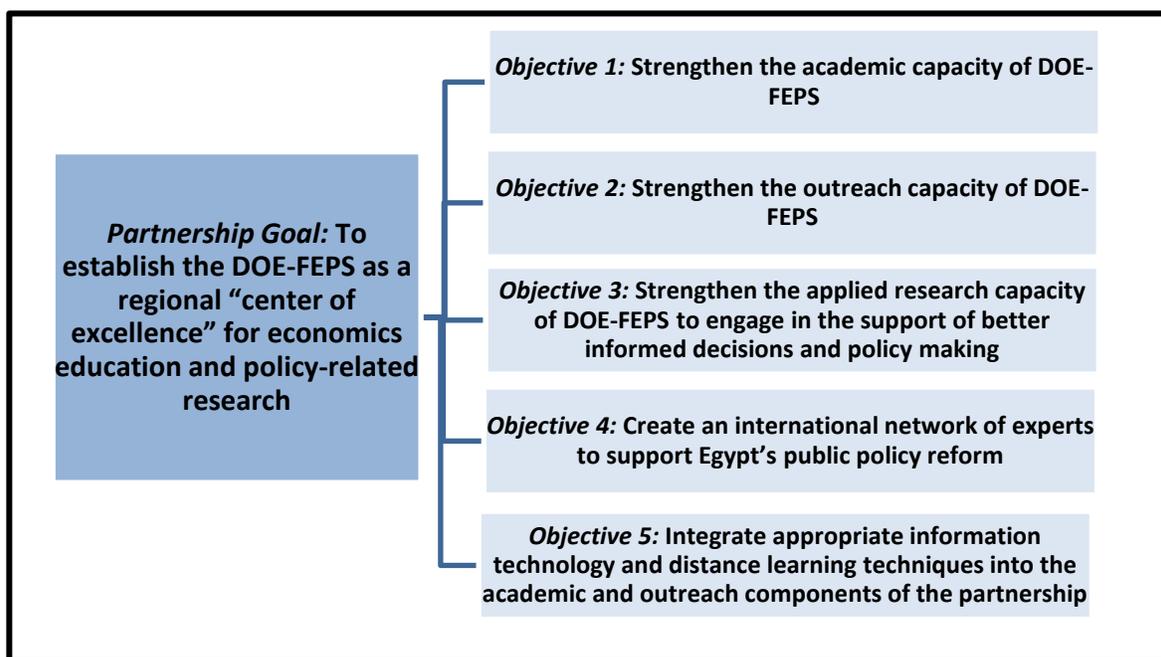
strategic impact assessment with aims to utilize existing monitoring and evaluation documentation to articulate the partnership’s theory of change around which to develop assessment methodologies, assess partnership contributions to outcome-level change, and provide recommendations to ensure sustainable achievement of long-term objectives. A specialist was identified and contracted in May 2013, and the assessment began immediately thereafter. A summary of findings and recommendations is provided within the report below, and the complete assessment and all recommendations are attached as *Appendix B: External Sustainability and Strategic Impact Assessment*.

With the partnership award ending in the signing of a letter of intent for further collaboration between the deans of AYSPS and FEPS, the prospects for longer-term partnership sustainability are high.

## PARTNERSHIP ACHIEVEMENTS

### Results and Performance

Throughout nearly five years of implementation partners at FEPS and AYSPS have collaborated in partnership toward the following hierarchy of results.



The partnership contributed to the enhancement of DOE-FEPS capacity in economic research in several key ways. Major direct outputs of the partnership included the following:

- The design and execution of short-term faculty professional development courses at FEPS by GSU faculty experts

- Short-term academic visits of FEPS faculty to AYSPS for research and training
- The development and dissemination of joint research projects between FEPS and AYSPS faculty teams
- FEPS junior faculty member matriculation into and completion of AYSPS master’s program in Public Policy
- Collaborative development of information technology to support academic and outreach activities at FEPS

Through its multiple activities, the partnership reached a total of over 400 participants and encouraged female participation and leadership, in particular. The below table presenting the gender distribution of major partnership activities demonstrates that nearly 75% of participants were female.

Activity	Female Participants	Male Participants
Training Programs		
Experimental Research Methods	28	5
Advanced Econometrics Research Methodology and Evaluative Methods for Social Policy Analysis	24	6
Public Economics	13	6
Financial Econometrics	21	10
Visiting Faculty	7	0
Joint Publications	4	3
Tax Experiment	195	75
Final Conference	26	8
<b>Total</b>	<b>317</b>	<b>113</b>

The partnership supported the development of female experts in economics through the training programs, which attracted a majority of female faculty members, and opportunities provided to seven visiting female faculty members. FEPS leaders involved in the partnership were overwhelmingly female as well, including the deans, partnership directors, coordinators, and primary faculty members.

The partnership contributed to strengthening the academic capacity, applied research capacity, and the creation of an international network of experts by designing and delivering four **faculty professional development courses** at FEPS over the life of the award. These train-the-trainer activities brought GSU expert faculty members to FEPS for interactive, short-term trainings in a variety of pertinent economic fields.

From March 29-April 9, 2009 AYSPS associate professor of economics Dr. Susan Laury delivered the faculty training program in Experimental Economics. The training provided an in-depth overview of market experiments, game theory, public goods and externalities, individual decision-making (such as decision-making under risk), and policy and field experiments. As Experimental Economics is a relatively new field in Economics, this training provided participants exposure to some of the main contemporary areas of experimental research. The training solicited hands-on participation through computerized and hand-run experiments, and encouraged discussion of published research.

On November 15-26, 2009, AYSPS professor of economics Dr. Shiferaw Gurmú led a training course in Advanced Econometrics for FEPS faculty. The training discussed selected topics in Econometrics, such as panel data models, binary outcome models, Tobit and selection models, survival analysis, and program evaluation, and presented an overview of core methods. The training equipped FEPS junior faculty with the knowledge and skills of state of the art analytic techniques, using STATA software installed through the partnership.

In 2012, the partnership hosted two trainings – one in Public Economics on January 15-19, and the second in Financial Econometrics on January 22-26. These trainings had not been originally planned, but were added based on FEPS demand following the Advanced Econometrics course. The Public Economics course was delivered by AYSPS professor of economics Dr. Sally Wallace and focused on theoretical and empirical analysis of the burden of public funding decisions. As a field, Public Economics examines government tax and spending policies. As such, the course provided participants with background on the study of the theory of taxation, incidence, equity, and investigated the behavior of firms and individuals in country cases such as Pakistan.

The five-day Financial Econometrics course was delivered by AYSPS and Robinson College of Business professor of economics and risk management Dr. Richard Luger. The course was designed for participants to learn about the theoretical background and implementation of some of the main tools used in the analysis of financial markets data. With each day divided into a theoretical component and applied work, participants were introduced to the open-source R programming language, and subsequent topics such as Time Series Models, ARIMA Models in R, Volatility Modeling, GARCH Models in R, Correlation Modeling, and DCC Models in R. This applied work using the R language positioned participants well to continue reading the financial economics literature and easily use future applications of their choice. Selected photographs of these partnership trainings are provided in the appendices.

The **graduate student exchange program** provided a significant investment in and opportunity for enhanced academic and applied research capacity of FEPS faculty. One FEPS junior faculty member (a teaching assistant in the Political Science department) enrolled in the master's in Public Policy program at AYSPS in January 2012 and completed his course of study within four semesters, in May 2013. Coursework in the graduate program included topics not taught at FEPS, such as Applied Microeconomics, Applied Research Methods and Statistics II, Economics of the State & Local Public Sector, Evaluation Research, International Public Economics, Macroeconomic Analysis, and Public Finance and Budgeting. The scholar used this opportunity to develop knowledge and research methods for application to public policy issues in Egypt, and returned to Cairo after his program ended. Subsequently, he was accepted into a fully-funded doctoral degree program in Public Policy at GSU, where he will begin in fall 2013, and intends to return to CU as a full-time faculty member upon completion of his PhD. CU maintains an institutional practice to hire from within its own graduate base, and FEPS is enthusiastic and supportive of the scholar's efforts.

Also contributing to enhanced academic and applied research capacity at FEPS were the **faculty exchange visits** of seven FEPS academics to AYSPS for research and training. This partnership component promoted self-directed learning and research opportunities, as well as professional development in teaching and pedagogical strategies for selected FEPS faculty members. While partners had originally budgeted for three beneficiaries of such an exchange visit, increased demand led partners to increase the total number of faculty involved to seven. One additional faculty member was intended to join, bringing the total to eight, but was unable to participate at the last minute for personal reasons.

These exchange visits took place during the summer session 2011, with six faculty members remaining at GSU for one month's time, and the seventh for a period of three months. Four faculty members' visits overlapped with AYSPS policy courses "Public Budgeting and Fiscal Management" and "Tax Policy, Fiscal Analysis and Revenue Forecasting," which they were able to attend. These courses served to strengthen faculty knowledge and skills in these fields.

Another component of the exchange visits was devoted to faculty pedagogical strengthening and curricular development abilities. FEPS visiting faculty had access to GSU professors during their visits, and arranged meetings with faculty members in similar fields or working in areas of interest. These meetings gave FEPS faculty the opportunity to discuss their curricula and teaching syllabi and exchange ideas with GSU faculty members. As a result, FEPS faculty scholars were able to upgrade their syllabi and obtain recommendations for new resources they had not been aware of previously – particularly for graduate and undergraduate courses in public finance, macroeconomics, and econometrics.

During their time at GSU, faculty had full library and online database access to aid in their research endeavors. This provides faculty scholars with up-to-date and relevant sources in their fields of interest, and furthered their professional development. In addition, while on exchange at GSU one FEPS faculty member who is an administrator of the Center for Economic and Financial Research and Studies at FEPS had the opportunity to collaborate with GSU counterparts to discuss capacity-building strategies to further enhance the Center.

Three of the eight FEPS faculty members who participated in exchanges to GSU also engaged in **joint research projects** with GSU counterparts. These research projects, through their impacts on participating faculty members, served to strengthen academic and applied research capacity at FEPS. The following research teams came together to write academic papers on the listed topics:

Title: *Macroeconomic Policies and Growth in Egypt: Policy Options*

Co-Authors: Manal Metwaly (Director of Center for Economic and Financial Research and Professor of Economics, CU); Andrew Feltenstein (Professor of Economics, GSU); Jeffrey Condon (Ph.D. student and Graduate Research Assistant, GSU)

Presented: January 17, 2012 and June 25, 2013 at CU

Title: *Outcomes-Based Assessment of Supplemental Tutoring in Egypt: Evidence from the Egypt Labor Market Panel Survey*

Co-Authors: Dr. May Gadalla (Professor of Economics, CU); Dr. Mary Beth Walker (Professor of Economics and Dean of AYSPS, GSU)

Presented: June 25, 2013 at CU

Title: *Is Fiscal Decentralization Harmful to Business Climate?*

Co-Authors: Dr. Lobna Abdel Latif (Economics Department Chair and Professor of Economics, CU); Dr. Jorge Martinez Vazquez (Director of the International Center for Public Policy and Professor of Economics, GSU); Dr. Musharraf Cyan (Assistant Research Professor of Economics, GSU)

Presented: June 25, 2013 at CU

The final versions of these jointly-written research papers can be found attached to this report within the *Appendix A: Final Partnership Report*.

These three research projects were disseminated on the CU campus through a series of **outreach seminars** open to the larger community. In January 2012, Andrew Feltenstein and Jeffrey Condon traveled to Cairo to deliver their research presentation with co-researcher Manal Metwaly at FEPS. The event provided the presenters an opportunity for faculty professional development, and the institution an opportunity to bolster its reputation and outreach capacity by hosting an international research team.

On June 25, 2013, the FEPS hosted a culminating partnership research dissemination conference at CU, where the remaining two teams of co-authors from FEPS and AYSPS presented their joint research papers. AYSPS joint researchers Mary Beth Walker and Musharraf Cyan traveled to Cairo for the event, where they presented their research with co-authors May Gadalla and Lobna Abdel Latif, respectively.

The event also provided the opportunity for overarching discussion of partnership outcomes and featured feedback from partnership beneficiaries of training courses, the short-term faculty exchange program, and the graduate student who completed his AYSPS program in May, as well as a second presentation of joint research by Manal Metwaly. The deans of AYSPS and FEPS chaired the event, in which approximately 30 attendees participated, including representatives from HED and USAID/Egypt. The event concluded with the signing of a letter of intent between the deans to continue institutional collaboration, including visiting scholars to GSU, joint research, short-term visiting professors to CU, and the development of capacity-building activities for the FEPS Public Policy department to train government officials.

Two seminars were also delivered on the GSU campus during faculty exchange visits. On June 29, 2011, one FEPS faculty member provided an economic presentation to the GSU community entitled, “The Egyptian Economy Post January 25: Challenges and the Way Forward.” On August 8, 2011, five FEPS faculty members participated in a panel discussion entitled, “Recent Economic and Political Developments in Egypt and Future Prospects,” which included a presentation by the Chair of the FEPS and discussion between panelists and the GSU audience. These events provided

opportunities for FEPS faculty to publically share their research and gain experience in giving professional academic presentations in international contexts.

Finally, toward capacity enhancement in economic research, partners incorporated and carried out one new research endeavor at CU – the design and implementation of the **first known economic experiment** in Egypt. This project, titled "The Implications of Trust in Government on Tax Compliance in Egypt," was initiated through the collaboration of one FEPS junior faculty member with professor Sally Wallace, whom the FEPS faculty member had met as a participant in partnership-coordinated faculty training course led by Dr. Wallace in 2012. The research project set out to determine how trust in government affects the government's ability to successfully collect public revenues. The resultant publication, which is still in progress, will help policymakers understand the behavioral aspects of taxpayers and decisions to comply with the tax system, which will be critical to the success of Egypt's public finances.

In January 2013, the FEPS junior faculty member traveled to Atlanta to pilot the experiments there, and from March 15-22, 2013 the GSU economics professor and one research associate visited CU to mentor and assist in conducting the experiments. The experiment itself included 270 CU students, and took place in a FEPS computer laboratory that the partnership converted into an experimental research station, complete with dividers between computer stations.

In addition, GSU assisted CU in developing a **protocol for ensuring sound ethical treatment in research**, because there had not previously been an institutional review board or conduct of research code in place. GSU assisted CU partners with materials and training regarding methods of responsible conduct, and the protocol was implemented.

This experiment serves the partnership's objectives in multiple ways – first, it provided an opportunity for FEPS faculty to gain expertise in a new form of research. Second, it provided FEPS with the physical space and institutional capacity to hold such experiments in the future. In addition, it allowed FEPS to broadcast the experiment to its larger student body to garner enthusiasm and awareness. Partners recounted to HED that there was more student interest in participating than room for subjects in the experiment. Surplus students – initially drawn to the experiment due to the meager compensation advertised – expressed significant disappointment when turned away from participating, despite receiving the small compensation provided for showing up and waiting to participate (a general practice of such experiments).

The partnership worked toward its fifth objective to integrate appropriate information technology through the installation of **STATA statistical software** and provision of training in its use to faculty at FEPS. The 30 STATA licenses provided by the partnership will support the econometric modeling and analysis for faculty and students, and assist in their ability to produce innovative and contemporary research.

In addition, the FEPS Social Science Computing Department worked in collaboration with GSU staff on the redesign of a **web-based resource center** that could serve as a platform for information exchange and instructional material for faculty, students, and other

stakeholders. FEPS consulted with GSU for feedback and comments on the website design. GSU provided a detailed document of suggestions and observations based on best practices in web design, which assisted FEPS in building its accessible, organized, and aesthetically pleasing final product. A live sample of the website homepage is provided in *Appendix C: FEPS Website Homepage & Deans' Welcome*.

## **Effects on Institutional Systems**

Through partnership interventions, FEPS has gained enhanced institutional capacity to sustain faculty and student research endeavors in the field of economics. This is particularly evident through the procurement of STATA statistical software licenses and infrastructure to make use of the software. In addition, FEPS has developed its institutional capacity to carry out experimental research, and now has a laboratory fitted for that express purpose. This new approach was unveiled to the community in a way that generated excitement, and is therefore likely to continue.

While potential impacts on the FEPS centers such as the Center for Economic and Financial Research and Studies remain uncertain, the partnership has paved the way for institutional enhancements in this area.

Further, the participation of the FEPS junior faculty member in the AYSPS Public Policy master's degree program sets a precedent for professional growth and institutional leadership. It is evident in the letter of intent signed by the deans of both schools that FEPS leadership is supportive of this mechanism for faculty growth and intends to have other FEPS faculty members participate in capacity-building long-term training programs. In this, FEPS administration also shows its flexibility and commitment to retaining faculty, which can sometimes be a barrier to professional growth for junior faculty.

In terms of governance, a new director of the FEPS International Relations Office was named in the partnership's final year, and became very involved in and supportive of the partnership. This positive occurrence provided a systematic hub of leadership for FEPS international activities that was able to serve as a coordinating body for the partnership. In the future, this role has potential to sustain, coordinate, and enhance this and other institutional relationships, which will lead to continued capacity expansion at FEPS and mitigation of communication and logistical coordination challenges (discussed below).

## **Overall Change**

While there is still work to be done in establishing FEPS as a regional "center of excellence" for economics education and policy-related research, partnership achievements contributed to significant progress toward developing new human and institutional capacities for policy analysis at FEPS. Partnership interventions helped to

professionalize FEPS faculty, enhance their research skills, expose them to new ways of conducting and presenting research, resources to support research, and new teaching modalities. FEPS co-researchers now have experience utilizing new analytical methods and techniques and presenting internationally through seminars and conferences. Their participation in partnership-related activities will help them to better apply policy analysis to pertinent economic issues in the Egyptian context. These impacts on faculty members will, through their classroom teaching and advising experiences, also benefit CU students.

Likewise, FEPS is now equipped with the methodological background and physical facility to conduct experimental economics research on a variety of relevant topics. Institutional capacity has been updated with the access to new software and educational resources.

These new skills and facilities will help enhance FEPS' contribution to policy formulation and analysis for the Egyptian government ministries and international agencies with which the institution works closely. The results accomplished will also help keep FEPS competitive in international research trends and best practices. Over time, as faculty continue to devise high-quality, relevant, and internationally competitive research, FEPS' reputation as a center for policy research will continue to grow. Its reputation as a hub for economics education, too, will grow as faculty bring their new skills and abilities into their classrooms, and as knowledge and abilities are transmitted to students.

***"We are aiming for a strategy that sets out to strengthen the internationalization of our education system. It is my and my colleagues' ambition that we create best possible framework to enable our students and academic staff to navigate an increasing globalized world through joint certification programs, post doc programs, structured visiting professors programs, joint research work and joint conferences and seminars."***

*– Prof. Hala El Said, Dean of CU-FEPS*

## **SHARING LEARNING**

### **Challenges and Solutions**

Partners experienced multiple challenges throughout the partnership's five years of implementation – from coping with the impacts of social and political unrest in Egypt to maneuvering in light of more menial challenges such as delays in visa acquisition for FEPS faculty exchange visitors.

The most obvious and unexpected partnership challenge faced over the course of implementation from 2010 onward was the unpredictable sociopolitical situation during and in the aftermath of the Egyptian Revolution. These unexpected events caused some partnership delays: 2011 faculty exchanges to GSU began months later than anticipated, and some faculty were delayed in completing their joint research due

to the overwhelming political upheaval at home, for example. While the unrest and political upheaval associated with the Egyptian revolution posed challenges to the partnership, the university at large, and the personal lives of partners, the situation also catalyzed increased enthusiasm and excitement at CU for the partnership. GSU recounted that many FEPS faculty members became more interested in becoming involved in partnership activities as they acknowledged the potential increased relevancy of FEPS as a hub for economic decision-making in a post-revolution Egypt. This heightened energy surrounding the partnership helped carry it forward in spite of the challenges.

At once a positive occurrence and a challenge, increased demand for partnership activities at FEPS caused for many requests to modify planned partnership activities. The AYSPS partnership team worked with FEPS administrators and HED to alter partnership activities to adequately respond to FEPS' capacity-building needs, and the partnership proved flexible in accommodating critical changes. However, consistent changes also led to delays in partnership implementation, and to more emphasis on certain partnership aspects than others. For example, partners cut down on curricular review activities in order to first respond to additional faculty capacity-building needs.

Some of the requisite changes to partnership activities were caused by changes in leadership at FEPS. In the first year, as the FEPS partnership director changed roles within the university, FEPS priorities were reassessed and partners found the need to alter the partnership work plan accordingly. Keeping partnership objectives in mind, the teams worked with HED to update the work plan, as feasible. During 2009, in the midst of repeated partnership changes that began to hinder implementation, the partnership instituted a plan, supported by HED and reinforced during a 2010 monitoring visit, to limit budget modifications to no more than once in each six month period. This helped catalyze consensus and keep competing interests at bay, and allowed the partnership to move forward with implementation and then continually look back to engage in results-based management to reassess the implementation strategy, as needed.

FEPS struggled to identify a suitable candidate for the graduate program at GSU – a partnership component that was originally intended for the benefit of more than one junior faculty member. This challenge was primarily due to the financial structure of this partnership component. While GSU committed to waive tuition for the graduate programs and provide a \$5,000 stipend per year, provided that suitable CU faculty members apply and be accepted, and FEPS agreed to contribute some costs as well, candidates would be responsible for other costs of transportation and living in Atlanta. This arrangement proved impractical for most students who were interested in participating in the opportunity. Finally, after several calls for students to join the master's program, FEPS identified an interested candidate. This delay contributed to the need for a no-cost extension to the Associate Cooperate Agreement. In the end, the graduate student's course of study went extremely well, and he was offered full funding to return to GSU for a PhD program, as noted above.

The partnership would have been able to support one additional FEPS faculty member for an exchange visit to GSU, but the faculty member was unable to participate for personal reasons. This was an unanticipated and unavoidable challenge.

Another challenge related to faculty exchange was navigating the system for J-1 visa acquisition through USAID/Egypt. Partners did not anticipate how time-consuming and labor intensive it would be for Egyptian participants to obtain J-1 visas. GSU partners attended the Washington, DC trainings and HED assisted in connecting partners to USAID/Egypt in order to fully understand the mission-specific requirements. Partners identified and hired a local coordinator at FEPS to work as a liaison between GSU, CU, and USAID/Egypt on visa matters, which helped smooth the process significantly. Visa challenges were ultimately addressed with considerable coordination, diplomacy, and dedication, but, needless to say, caused some significant partnership implementation delays.

## **Lessons Learned and Best Practices**

Partners have cited multiple lessons learned from their experience over five years of partnership. In light of the continual changes due to turnover in leadership (described above), partners suggested that in similar circumstances HED and USAID should set the tone for clearly defined expectations for when, how often, and under what circumstances the partnership budget should be altered for programmatic changes.

Partners also noted the critical importance of communication and flexibility in such institutional partnerships. In order to respond to the best interests of the host country institution, the U.S. institution must be responsive and flexible. Adjusting the sails when and if needed is, of course, a critical element of results-based management. Having a strong team that works well together at both partner institutions is a necessary prerequisite for successfully achieving such mutually agreeable changes.

Likewise, the partnership team learned that care must be taken when designing partnership elements that involve long-term training. While, to a state institution such as GSU, the tuition waiver and stipend they offered to provide seemed generous and feasible, it proved unrealistic to most CU junior faculty members. If the team had been able to anticipate these limitations, they could have reassessed the long term training component to ensure continuity of implementation while not sacrificing potential impact.

Related to efficient implementation, GSU partners found that it greatly improved implementation, communication, and the pace of the partnership to have a designated coordinator assigned responsibility for logistical tasks at FEPS. FEPS identified a recent graduate to serve as partnership coordinator, who was detail-oriented and timely in her work. She was especially adept at working with exchange visitors to compile the packets of information required for the J-1 visa acquisition process and liaising with USAID/Egypt to navigate the requirements and ensure that participants received their visas in a timely manner. She devoted many late evening hours to guaranteeing good communication over

Skype, across time zones, with AYSPS partners. In addition, the coordinator helped organize partnership-funded events (trainings and seminars) at CU, and worked with FEPS administrators to make sure that everything ran smoothly. The presence of a designated partnership coordinator in the host country was an essential component of this partnership's success. If future collaborations take place, partners must ensure that designated points of contact are assigned on both sides of the partnership, and that (in the case of faculty points of contact) course releases are provided so that points of contact have the time in their schedules to devote to partnership planning, or (in the case of non-faculty points of contact) that other arrangements are made to provide compensation for such a position.

### **Partnership Sustainability and Strategic Impact Assessment**

In preparation for the close of the partnership in August 2013, HED prepared a statement of work for a sustainability and strategic impact assessment with the following three aims:

1. Utilize existing M&E documentation to articulate the partnership's theory of change around which the assessment methodology will be developed;
2. Use the reconstructed theory of change to assess the partnership contributions to outcome level change and document lessons learned from implementation; and
3. Provide recommendations to partnership institutions, HED and USAID on strategies and specific actions to ensure sustainable achievement of long-term objectives.

A specialist was identified and contracted for the assessment in May 2013, and the assessment began immediately thereafter. The evaluation specialist traveled to Egypt in June 2013, to coincide with the partnership final conference, and conducted numerous stakeholder interviews with FEPS, AYSPS, HED, and USAID collaborators. She followed up with a series of distinct survey mechanisms catered to various primary stakeholder groups, using primary partnership documents to provide background information as well.

Summative findings of the assessment showed that human, institutional, and outreach capacities have been developed through partnership interventions in the following primary ways (excerpted from the evaluator's assessment report):

- *Human capacity was furthered through joint faculty research projects where research skills, new areas of expertise, and the integration of knowledge into a long run research agenda were enhanced.*
- *Faculty visits to AYSPS also allowed for enhanced human capacity through exposure to resource rich libraries, collegial discussions and observations of pedagogical innovations.*

- *Institutional capacity was enhanced by the Partnership as both institutions are engaged in building a long-term collaborative research agenda. This collaborative research is a key component to maintaining a sustainable relationship.*
- *The short courses offered by AYSPS faculty at FEPS also contributed to the development of human capacity. These courses were an effective means to introduced faculty, staff and colleagues from other institutions to new ideas and techniques in economics and policy analysis. These courses need to have manageable amount of material and be on-going to build expertise over time. The continuation of these short courses whether provided by AYSPS faculty or later by FEPS faculty will be an important component of outreach to the larger policy community and will contribute to the reputation of FEPS as a training hub.*
- *Information technology expertise has been critical in supporting outreach capability and on-going research and teaching innovations.*

The evaluation specialist presented a number of recommendations for continued capacity-building of FEPS in the area of economics research (excerpted from the evaluator's assessment report):

- *Faculty development is the lynchpin for achieving many of the elements of becoming a regional hub for economic and policy expertise. Therefore deepening the relationship with AYSPS through continued joint projects and a mutual exchange of faculty and students are important post-project steps. A joint graduate program between FEPS and AYSPS was discussed as part of an end of project MOU. This type of activity will continue to deepen ties, as it will create common academic goals as well as a growing network of scholars within the institutions and the profession.*
- *To ensure the sustainability of this investment in human and institutional capacity, it is important for FEPS to plan for securing resources that will encourage continuous faculty development. This includes investing in electronic library resources, essential for staying current in the field, participating in trainings, conferences, international collaborations, and policy outreach.*

This final assessment will be shared with GSU and CU partners, and may be a useful tool for assessing the prospect of sustainability at the program outcome level and for developing strategies to continue to expand the capacity of FEPS. The complete assessment, reconstructed partnership theory of change, and all recommendations are attached to this report as *Appendix B: External Sustainability and Strategic Impact Assessment*.

## **SUSTAINABILITY**

### **Steps Taken Toward Sustainability**

Many aspects of the partnership – such as faculty independent research, organic collaborations between faculty at institutions, transmission of knowledge and approaches from trained faculty to students, to name a few – will freely self-perpetuate, and many new ideas have been generated throughout this final year of implementation. This partnership award concluded with the signing of a letter of intent between the deans of GSU AYSPS and CU FEPS to continue institutional collaboration. This letter of intent formalizes the commitment of both administrations to ensure that collaboration continue after the end of HED funding.

Opportunities envisioned for the 2013-2014 year include:

- Accepting visiting scholars for semester-long study in Economics and Public Policy at GSU;
- Enhancing joint research work in the areas of experimental economics, political economy, financial economics, and public policy;
- Short-term visiting professors from GSU to teach experimental analysis, behavioral economics, or political economy at CU;
- Activities to build capacity for the Public Policy department and center at FEPS to train government officials on public policy issues; and
- Short visits for teaching assistants from FEPS to attend AYSPS courses or intensive training programs to build their research capacity

While these activities require funding commitments in some cases, and time commitments in all cases, their relative costs are low. Research, for example, will be a relatively low-cost way for partners at both institutions to remain engaged and learn from each other. Partners have discussed the idea of applying for small-scale research grants to provide funds for joint research.

The stage is now set for faculty members to continue their personal collaborations across institutions, which holds boundless potential for future collaborative research endeavors, publications, and sharing of strategies. If faculty at both institutions are encouraged and available to do so, these future outcomes can easily take place.

According to the same letter of intent, longer-term potential activities to be explored include:

- Development of joint certificates in Economics and Public Policy to be offered at FEPS;
- Development of master's degrees in Economics and Public Policy at FEPS;
- Development of doctoral degrees in Economics and Public Policy at FEPS;
- Mutual exchanges between FEPS and AYSPS to increase future collaborative research between CU and GSU; and
- Increasing scholarship opportunities for post-graduates in FEPS' Economics, Statistics, Political Science, and Public Administration departments

During the June 2013 meetings at AYSPS, HED observed a great enthusiasm and an expressed need regarding the possibility of developing a series of trainings for Egyptian government officials. AYSPS has worked on similar projects (in Indonesia, for example)

to jointly design programs that will build the capacity of government officials, and is an opportune counterpart for this kind of training program.

### **Factors that May Influence Sustainability**

The medium-long term political future of Egypt is uncertain, and can help or harm partnership sustainability. This is an external factor to partnership sustainability. Ongoing unrest and political events in Egypt will continue to impact the functioning of CU and FEPS, which will be a variable factor in partnership sustainability. At the same time, political liberalization would present a potential opportunity for greater relevancy of the economic recommendations that FEPS can provide, and increased interest in FEPS as a hub for policy recommendations. At the partnership award's end, at least, FEPS and CU leadership, faculty, and students were engaged, interested, and supportive of continuing partnership efforts.

Continuing research collaborations will depend on the availability and individual initiative of faculty members to move forward. In such an environment, with lecturers having large course loads and, in addition to their teaching responsibilities, multiple part-time sources of employment due to their relatively small salaries, it may be difficult for individual FEPS academics to find the time to devote to joint research with AYSPS counterparts. However, this is an internal factor to sustainability that can be controlled somewhat through incentivizing strategies.

Longer-term activities that both institutions wish to explore will require greater time commitments and larger funding amounts than the short-term, low-cost activities. New CU certificates and degree programs require a series of institutional approvals – at the level of the faculty, the university, and the ministry – before they can be offered, which can take significant time and effort. Scholarships for long-term training at GSU or other U.S. higher education institutions will be costly, and outside funding will likely be required. These are opportunities that have the potential for widespread positive impact at FEPS, but for which partners will undoubtedly need to identify additional sources of funding and support.

One factor that may negatively impact sustainability is that it was a primary focus woven into partnership implementation from day one, but rather an important consideration that was addressed toward the partnership's final year. This may limit the partnership's overall opportunities for a durable sustainability plan.

### **Overall Prospects of Sustainability**

The partnership award has ended with a significant opportunity for continuous institutional engagement between GSU and CU in the fields of economics, political science, and public policy. In the short-term, there are significant low-cost activities in which partners can

engage – such as joint faculty research, short-term visiting scholar and visiting professor arrangements, and sharing of curricula – to continue to build upon the partnership’s capacity-building foundation. If FEPS faculty members continue to produce and publish competitive research and policy guidance with their enhanced skills and abilities, the resulting reputational influence will self-perpetuate sustainability in its own way.

Additionally, the potential for developing longer-term collaborations such as joint certificates, master’s degree programs, and doctoral programs at FEPS is very high. The jointly-signed letter of intent between the deans of AYSPS and FEPS is a testament to the commitment of both administrations to ensure that long-term collaboration continue, but partners must strategize to determine how such opportunities could feasibly be funded before they can become a reality. If positive momentum continues and institutional interests continue to be aligned, it is likely that these new collaborations will occur.

## **APPENDICES**

### **Appendix A: Partnership Final Report and Appendices**

# Higher Education for Development (HED) Final Partnership Report

## I. Partnership Overview (2-3 pages)

### a) Description of partnership context and partnership objectives

The overarching goal of the partnership between Cairo University's Department of Economics, Faculty of Economics and Political Sciences (DOE-FEPS), and the Andrew Young School of Policy Studies (AYSPS) at Georgia State University (GSU) was to expand the capacity of the DOE-FEPS faculty in economics research and to strengthen sustainable outreach capacity in order to serve as a regional hub for teaching, research, and a provider of technical assistance and service in economics in Egypt and the Middle East Region.

Additionally, this partnership aimed to contribute to economic development in Egypt and in the region by achieving more informed policy making by building human capacity in academia, government, and civil society through education and training. GSU aimed to engage faculty from DOE-FEPS in AYSPPS' Economic and Public Policy Training programs so that they would develop skills to be able to facilitate such trainings in Egypt in the long run. Additionally, we hoped to expose DOE-FEPS to the activities of AYSPPS' fiscal policy centers to enhance the activities at Cairo University'. As the partnership evolved the focus on capacity building DOE-FEPS deepened to include joint publications, seminars and a Master's program for one student. Lastly, the partnership was a basis to build a strong and enduring relationship between Cairo University and Georgia State University in support of economics education and research, as well as sound public policy reform.

The American Council on Higher Education office of Higher Education for Development (HED) on September 26, 2008 awarded support for an institutional partnership in higher education under HED's Collaborative Partnership Program titled, "GSU-Cairo University Partnership". At the midpoint of implementation, the work plan had been reviewed in consultation with DOE-FEPS. The review was carried out in meetings in Cairo during March 29 to April 6, 2010. As a result of the review, both partners expressed satisfaction over the key objectives of the Partnership and recommitted their efforts to timely implementation with optimal results. It was established that the Partnership was a step toward the medium term objective of building up DOE-FEPS as a regional hub for policy research. In this regard, the following key objectives for the Partnership implementation were clarified:

- Build research and publication capacity through development of joint research papers
- Train junior DOE faculty on advanced analytic methods and use of econometric software to support economics research; and
- Provide training in public policy

The partnership aimed to achieve tangible targets under each activity. In summary, the activities were to result in the following achievements:

1. **Training of trainers:** Junior faculty at DOE-FEPS would be trained in topics such as advanced econometrics and experimental economics, two key academic disciplines that

- can support policy research. This would help provide higher level of analytic skills to researchers and graduate students at the DOE, CU.
2. **Research and publication capacity:** Senior faculty members from AYSPS would collaborate with faculty members from DOE-FEPS, CU to develop policy relevant papers on the economy and public policy of Egypt. By this activity, DOE-FEPS would potentially gain in profile, train junior faculty to work on research papers that have an international recognition, strengthen their publication skills and work toward academic excellence. The research papers themselves would support development of a research based policy dialogue on topical policy issues in Egypt.
  3. **Seminars.** A series of seminars will be organized to mark the culmination of the research papers component of the Partnership. Co-authors from AYSPS would join the DOE-FEPS faculty to present their work to faculty and graduate students in Cairo. The seminars would highlight the research methodology as well as the key findings of the research papers, strengthening junior faculty and graduate student skills for academic and policy related research. The partnership also aimed to engage participants who were involved in policy work in Egypt.
  4. **AYSPS-DOE-FEPS, Faculty Exchange:** Faculty members from DOE-FEPS would visit AYSPS and participate in the AYS activities and research. The faculty exchange would provide important opportunities to the DOE-FEPS faculty to participate in academic seminars and enrich their research agendas. It would also provide opportunities for the DOE-FEPS research centers to imbibe AYSPS strengths and programs for application to institutional development of centers at FEPS.
  5. **Master's Program** – The activity also aimed to recruit students from Cairo University to attend a Master's program in Economics, Public Administration or Public Policy at AYSPS. DOE-FEPS and GSU committed partial funds to this activity in order to facilitate the successful completion of this aim.
  6. **Note on majority female participation and leadership** – Although this was not by design, it so happened that the partnership had a significant number of female participants who also took leadership positions both at CU and GSU. A former GSU faculty member, Dr. Eunice Heredia and the then head of department, for FEPS Dr. Heba Nassar (Now VP at CU), developed the initial partnership plan. Ms. Shereen Bhan, Assistant Director at ICePP, AYSPS, GSU led the day to day to management of the program from its inception to closure. Upon the promotion of Dr. Nassar, Dr. Lobna Abdel Latif took over the department head position at FEPS and become GSU's lead contact person at CU. Several other female faculty members, including Dr. Amirah Elhaddad and Dr. Manal Metwaly, also assisted her in this endeavor. All the visiting faculty members from CU were also female. We do not think this is a coincidence. It is quite evident that CU has a large female faculty population, many of whom are in the faculty of economics and political science. On the sponsors end, Manal El-Samadony was the senior economist at USAID/EG/SPP responsible for monitoring this partnership and Hazel Cipolle was the lead contact person for both GSU and CU at HED. Two of the four training programs delivered at CU were by female faculty members (Dr. Susan Laury and Dr. Sally Wallace). The tax experiment design was developed by Dr. Sally Wallace at GSU and Dr. Sarah Mansour at CU and delivered jointly at CU to a majority of female participants. Four of the 7 co-authors for the joint publications were female (3 CU, 1 GSU). In fact it so happened that during the partnership Dr. Mary Beth Walker was appointed dean of the Andrew Young School of Policy Studies and she was one of the co – authors for the joint

publication. Included below is a table, which includes a gender wise distribution of participants for major partnership activities. The partnership did not target specific partnership rates but we're very happy to have generated such a significant female participation rate since it is not usually the case. In fact GSU's annual public policy training programs typically get a higher male participation rate (sponsored by foreign governments) so it was a welcome change to see such a high number of females.

<b>Activity</b>	<b>Female Participants</b>	<b>Male Participants</b>
<b>Training Programs</b>		
<b>Experimental Research Methods</b>	<b>28</b>	<b>5</b>
<b>Advanced Econometrics Research Methodology and Evaluative Methods for Social Policy Analysis</b>	<b>24</b>	<b>6</b>
<b>Public Economics</b>	<b>13</b>	<b>6</b>
<b>Financial Econometrics</b>	<b>21</b>	<b>10</b>
<b>Visiting Faculty</b>	<b>7</b>	<b>0</b>
<b>Joint Publications</b>	<b>4</b>	<b>3</b>
<b>Tax Experiment</b>	<b>195</b>	<b>75</b>
<b>Final Conference</b>	<b>26</b>	<b>8</b>
<b>Total</b>	<b>317</b>	<b>113</b>

**b) Summary of activities and work over the life of the partnership**

**Training Courses**

- **Advanced Econometrics** – November 15<sup>th</sup> – 26<sup>th</sup>, 2009
- **Faculty Training Program in Experimental Economics** – March 29<sup>th</sup> – April 9<sup>th</sup>, 2009
- **Public Economics** – January 15 – 19<sup>h</sup>, 2012
- **Financial Econometrics** – January 22 – 26<sup>th</sup>, 2012

**Research and Publications**

- "Macroeconomic Policies and Growth in Egypt: Policy Options."
- "Outcomes-Based Assessment of Supplemental Tutoring in Egypt: Evidence from the Egypt Labor Market Panel Survey"
- "Is Fiscal Decentralization Harmful to Business Climate"

**Seminar**

In addition to the seminars that were delivered based on the above-mentioned publications a panel discussion was conducted at AYSPS, GSU about "Recent Economic and Political Developments in Egypt and Future Prospects"

**Faculty Exchange**

Under the joint research component, arrangements were made for 7 DOE-FEPS faculty members for one to three month travel and work at AYSPS with assigned co-authors from GSU faculty or work on their own research seeking support from GSU faculty

### **Master's Program**

Mahmoud Abduh Ali Elsayed (formerly Junior faculty at CU) was enrolled in the MA in Public Policy Program at AYSPS, GSU from January 2012 till May 2013. He did return to Cairo University upon the completion of his program as per his agreement with CU but applied for a PhD program at GSU as well. Therefore, he is now back at AYSPS, GSU with full knowledge and awareness of Cairo University to complete his PhD program and intends to return to Cairo after obtaining his degree. CU is happy about this development and is encouraging of further skill building for Mahmoud.

### **Website Development**

A template was developed for a more navigable and user friendly website for DOE - FEPS

### **Additional Activity**

The “Implications of Trust in Government on Tax Compliance in Egypt” was conducted at Cairo University. This was the first known laboratory experiment of this kind to be conducted in Egypt.

### **Protocol for Ethical Research**

GSU assisted Cairo University with materials and training regarding methods of responsible conduct as the experiments were conducted.

### **c) Description of partnership's most significant achievements**

**The “Implications of Trust in Government on Tax Compliance in Egypt” experiment** was a very significant achievement. It was unplanned and the International Center for Public Policy provided majority of the funding for this activity but the partnership also covered some travel expenses. This was the first known economic laboratory experiment in Egypt. It was conducted to determine how trust in government affects the government's ability to successfully collect public revenues. In addition Experimental Economics is a cutting edge field and being able to provide hands on experience and training to a CU faculty (Sarah Mansour) as well as delivering the experiment on CU campus was a tremendous source of pride and accomplishment for partnership participants.

**Additional Trainings in Public Economics and Financial Econometrics** – From all reports the training programs were well received. Participants were impressed with the content and delivery, and the interactive nature of the presentations. They indicated a desire to have further instruction on the topics presented. It is important to note that two training programs at this stage were not part of the work plan. GSU was determined to respond to the needs expressed by University of Cairo, which is why a last minute effort was made to deliver the financial econometrics program in addition to the already

organized public economics course. We had to make several adjustments in the budget as well as schedules of the professors and other arrangement. But we were very happy to have been able to make these adjustments and deliver the both courses successfully.

**d) Summary of impact on host-country development and prospects for sustainability**

Impact of Research and Publication activity on host country development:

As a result of key partnership activities, new capacities for policy analysis have been created at FEPS. In particular, the CU co-authors have experienced working with new analytic methods and techniques and have attended international seminars and conferences. Their participation in these events has provided them with experiential learning to apply policy analysis to policy issues.

Conduct of tax experiment at CU, initiated a new methodological technique at CU. The new experimental lab will be a lasting facility for CU to work with experimental methods in economics and policy analysis.

DOE-CU faculty is actively engaged in policy research and advice, working closely with government ministries like finance and local development. Individual faculty members work with a number of governmental and international agencies in areas of policy formulation and analysis. CEFRS conducts research to support informed policy making in Egypt. Building research capacity is strengthening the analytic and academic skills of the FEPS faculty. This will directly feed into policy research, agenda setting and implementation toward achievement of national development goals.

**e) Partnership period of performance, funding amount, leveraged funds, and cost share:**

Partnership period of performance: September 2008 to August 2013

Funding amount: \$399,525

Cost Share: \$169,320

**II. Partnership Results (10-15 pages)**

- a) Presentation of the partnership's key achievements and all major outputs produced including important research findings, if applicable.
- b) Detailed discussion of the partnership's development outcomes, specifically what significant impact the partnership has had.
- c) As appropriate, include tables, graphs or other diagrams that contain monitoring and evaluation findings to support your stated outcomes. Visual aids should highlight relevant results to make them clear and readily accessible.

The Partnership aimed at building academic capacity at CU for policy analysis to promote economic growth in Egypt. The key outputs were:

1. Training of junior CU faculty in advanced analytic methods and techniques for policy analysis
2. Installation of STATA for advanced empirical methods
3. Co-authorships of policy oriented research papers to strengthen policy analysis at FEPS
4. Participation of select CU faculty in GSU policy training courses

5. CU faculty visits and meetings with GSU faculty on GSU campus for detailed discussions on building long term capacities for FEPS centers
6. Curriculum upgrades to public finance courses at FEPS
7. Development of inter-academic linkages for ongoing cooperation and work between the two institutions
8. Masters program for junior faculty of FEPS
9. Tax experiment and creation of experimental economics laboratory at FEPS

### **A. Training Courses**

They key Partnership results in the training programs are summarized below, followed by detailed description:

<b>Date</b>	<b>Activity</b>	<b>Direct Beneficiaries</b>
<b>Training Programs</b>		
March 29th - April 9th	<b>Experimental Research Methods</b>	30
November 15 – 26, 2009	<b>Advanced Econometrics Research Methodology and Evaluative Methods for Social Policy Analysis</b>	30
January 15 – 19, 2012	<b>Public Economics</b>	19
January 21 – 26, 2012	<b>Financial Econometrics</b>	31
<b>Total No. of participants trained</b>		<b>110</b>

**Initially, only 2 training courses for CU junior faculty were included in the Partnership. Following a demand driven approach and to meet CU needs more comprehensively, 2 additional training courses were added and conducted.**

#### **1. Faculty Training Program in Experimental Economics - March 29th - April 9th, 2009**

Dr. Susan Laury, Associate Professor of Economics (AYSPS) and Associate Director (Experimental Center at AYSPS) guided lead training in Cairo, Egypt in the use of Experimental Economics in a variety of contemporary applications.

#### **Topics Covered:**

- Market experiments
- Game theory
- Public goods and externalities
- Individual decision-making (such as decision-making under risk),
- Policy experiments
- Field experiments

Experimental Economics is a relatively new, but increasingly recognized, field in Economics. Early experiments were primarily used to test economic theories in controlled laboratory settings, however over time their use has expanded to include

contributions to the development of new theories, informing policy debates, and exploring the causes of observed behavior. In this training course the participants studied the use of economics experiments by focusing on some of the main areas of experimental research. The course also included discussions about the design and implementation of a sound experiment, as well as data considerations. The training sessions were a combination of hands-on participation in computerized and hand-run experiments with discussion of published research in experimental economics.

**Selected Comments:**

- I think that the whole course is very important to me, especially market experiments, game theory and individual decision making
- Most useful - To discover new field in economics which would be useful in doing my Master degree; experience with computer experiments
- The exposure to a new tool of analysis. Prof Laury was clearly an authority on the subject. She shared a lot of her research and it was most informative
- I wish this won't be the last course; looking forward for further cooperation especially in making a research program where we can set and run experiment
- I'm going to to propose a paper using the knowledge I got from the course

**2. Advanced Econometrics - November 15th -26th, 2009**

Dr. Shiferaw Gurmu, Professor of Economics (AYSPS) covered selected topics in Econometrics with focus on practical aspects of implementation of advanced cross sectional, duration and panel data techniques.

**Topics Covered:**

- Panel Data Models
- Overview of some Core Methods
- Binary Outcome Models
- Tobit and Selection Models
- Survival Analysis
- Program Evaluation

The training in Advanced Econometrics conducted in 2009 aimed to equip a critical number of junior faculty with the knowledge and skills of state of the art analytic techniques, using stata software installed under the partnership. The success of the course stimulated the demand for an additional training course. DOE-FEPS requested conducting a third training course under the Partnership. The program budget did not cater for a third course. In this regard, GSU carried out budgetary modifications to accommodate the demand driven component and delivered not only a third but also a fourth training course. The learning will be used by the junior faculty to carryout policy analyses using advanced econometric methods for their research initiatives and provide improved policy papers for use in Egypt and the region.

**Selected Comments:**

- The most useful for me is to know about Panel data models and binary outcomes models, as I had limited knowledge about them before.
- Most useful - Learning Stata introduction and some new topics such as program evaluation and selection model. In addition I have deepened my knowledge of some previous known topics for me such as Panel Data models and Binary

Choice Models.

- Most useful - Learning new thing that widen the scope of my knowledge. I now know specifically what books should I refer to and how to begin. Professor Gurmu was helpful to answer my questions. Also, he was keen to know our response to the sessions and topics discussed.
- The materials were very useful as a documentation tool of the course (esp. since there was not enough time to write details). The lecture notes and slides, references offered (papers and book titles), datasets and do-files, printouts of Stata outputs helped a lot in making me follow the process and steps of analysis and get introduced to the output items. Finally, thanks for everyone who contributed to making this course possible.

### 3. **Public Economics** - January 15– 19<sup>th</sup>, 2012

Dr. Sally Wallace, Professor of Economics (AYSPS), Chair, Department of Economics and Director, Fiscal Research Center (AYSPS), delivered a course focused on a theoretical and empirical analysis of the burden of public funding decisions. In particular the course was focused on the study of the theory of taxation, incidence, equity, and investigated the behavior of firms and individuals and country cases.

#### **Topics Covered:**

- Overview of Tax Systems in sample countries
- Equity and Incidence of Taxation
- The incidence of Taxation
- Partial Equilibrium Framework
- General Equilibrium Framework
- Implications for distribution (equity) of tax system
- Optimal Taxation
- Taxes on Consumption vs. Wages

Public Economics examines government tax and spending policies: what does government do, what are the effects of these actions, and are these effects “good” or “bad”. This course focused on a theoretical and empirical analysis of the burden of public funding decisions. In particular, they studied the theory of taxation, incidence, equity, and investigate the behavior of firms and individuals. They also analyzed the empirical burden of taxation by studying the case of Pakistan. Using theoretical, empirical, and experimental tools, the course described the major taxes used around the world; it analyzed the impacts of taxation on the allocation of resources, the distribution of economic welfare, and the level of tax revenues; and it evaluated these impacts. There were a number of suggested readings for each section. The data and tools for the applied empirical analysis was provided and the research was carried out in a computer lab under supervision of the instructor.

#### **Selected Comments:**

- The training course was very beneficial especially for those have solid background in public Economics, it was well organized and the training material (GSU folder, the book, PowerPoint presentation, and data files) was available on time and was very useful.

- Dr. Sally is very professional in teaching; she has a clear and understandable language, and uses different methods for stimulating the participants to be interactive. She is very helpful and kind.
- By using Pakistan case study, the participants were able to understand how important the details of data, how to get data from surveys, and what type of data needed to be publicly released for the purpose of disclosure and research.
- To sum up the training course was very successful (compared to other previous ones), in terms of value added, teaching methods used by the Prof., and topics discussed.

#### 4. **Financial Econometrics** - January 22 – 27, 2012

Dr. Richard Luger, Professor of Economics and Risk Management and Insurance (AYSPS and RCB) provided an introduction to Financial Econometrics.

##### **Topics Covered:**

- Financial Time Series and their characteristics
- Introduction to R
- Time Series Models
- ARIMA models in R
- Volatility Modeling
- GARCH Models in R
- Practical Issues
- Correlation Modeling
- DCC Models in R

This five-day course provided an introduction to financial econometrics. It was designed for those who wanted to learn about the theoretical background and implementation details of some of the main tools used in the analysis of financial markets data. Each day was divided in two parts: one for the theory and another for the applications. The applied work made use of the open-source R programming language, which is freely available at [www.r-project.org](http://www.r-project.org). Most of the covered methods are also available in other environments, such as EViews and Stata. So after this introduction (in R) the participants would be well positioned to continue reading the financial econometrics literature and doing applied work in the environment of their choice.

##### **Selected Comments:**

- The training course went very well, it was very fruitful, and it was well organized. The main goal of the course was achieved and the course covered different topics and different financial time series models such as AR, ARMA, ARCH, and GARCH.
- The days were very well structured: theory in the morning followed by empirics in the afternoon. We think that this is ideal. Although 5 days is not enough of

course to cover a big topic like this, but the course put the participants on the right track.

- Professor Richard Lugar is very professional and experienced enough to cover the underlying subject efficiently. He was keen on explaining all details and answering every question. He was slow and he gave more weight to quality rather than quantity. We hope that professor Lugar can come again to give more lectures on financial econometrics such as ‘Bayesian econometrics, VAR ...’
- All in all, we are really impressed with the course and hope that you could keep it up

## B. Research and Publication

As part of the Partnership, academic cooperation was engendered at senior levels between faculty from GSU and FEPS CU. Three joint policy research projects were carried out. The topics were selected according to CU faculty preferences but also in consultation with potential co-authors at GSU. This made it a mutually meaningful activity with the potential of long term cooperation. Three research papers were written as a result of the joint research component of the Partnership:

Publication	Co-Authors - CU	Co-Authors-GSU
Macroeconomic Policies and Growth in Egypt: Policy Options	1	2
Outcomes-Based Assessment of Supplemental Tutoring in Egypt: Evidence from the Egypt Labor Market Panel Survey	1	1
Is Fiscal Decentralization Harmful to Business Climate	1	2
	3	5

1. Co-Authors, Dr. Manal Metwaly (Professor of Economics at University of Cairo) and Dr. Andrew Feltenstein (Professor of Economics) as well as Jeffrey Condon (PHD student, and Graduate Research Assistant) delivered a presentations on January 17th, 2012 at Cairo University about their paper titled, "Macroeconomic Policies and Growth in Egypt: Policy Options."

2. Co-Authors, Dr. May Gadalla (Professor of Economics at University of Cairo) and Dr. Mary Beth Walker (Dean, AYSPS and Professor of Economics) delivered a presentations on June 25th, 2013 at Cairo University about their paper titled, "Outcomes-Based

Assessment of Supplemental Tutoring in Egypt: Evidence from the Egypt Labor Market Panel Survey”

3. Co-Authors, Dr. Lobna Abdel Latif (Professor of Economics at University of Cairo and former chair DOE-FEPS) and Dr. Jorge Martinez Vazquez (Director, International Center for Public Policy and Professor of Economics) and Dr. Musharraf Cyan (Assistant Research Professor of Economics) co-authored a paper on: “Is Fiscal Decentralization Harmful to Business Climate”. Drs. Dr. Lobna Abdel Latif and Dr. Musharraf Cyan delivered the result of this work through a presentation on June 25<sup>th</sup>, 2013 at Cairo University.

### C. Seminars

In addition to the seminars that were delivered for the joint publications in Cairo the following talks were held at GSU

1. A talk was delivered by Dr. Manal Metwaly on June 29<sup>th</sup>, 2011 about “The Egyptian Economy post January 25<sup>th</sup>: Challenges and the Way Forward”. The presentation included an introduction, a description of the Economy before January 25<sup>th</sup>, the social and economic consequences of the revolution and the fiscal and monetary responses to these. Finally there was a discussion about the way forward and a question and answer session with GSU faculty who were present in the audience.

2. Panel discussion on "Recent Economic and Political Developments in Egypt and Future Prospects" was held on August 8, 2011 at the AYSPS building in Atlanta, GA, USA. The session began with a presentation by Dr. Lobna Mohamed Abdel Latif Ahmed (Former Chair - Faculty of Economics and Political Science at Cairo University), followed by a discussion between the visiting faculty from Cairo and the audience. The panel included 5 visiting professors from Cairo University:

1. Dr. Lobna Mohamed Abdel Latif Ahmed
2. Dr. Nagwa Abdalla Abdelaziz Samak
3. Dr. Amirah Moharram Saleh ElHaddad
4. Dr. Mona Esam Osman Fayed
5. Dr. Hanan Hussein Ramadan Nazier

Seminars Delivered	At CU	At GSU
The Egyptian Economy Post – January 25 <sup>th</sup> : Challenges and the Way Forward		<b>1 (June 2011)</b>
Macroeconomic Policies and Growth in Egypt: Policy Options	<b>1 (January 2012)</b>	

Outcomes-Based Assessment of Supplemental Tutoring in Egypt: Evidence from the Egypt Labor Market Panel Survey	<b>1 (June 2013)</b>	
Is Fiscal Decentralization Harmful to Business Climate	<b>1 (June 2013)</b>	
Recent Economic and Political Developments in Egypt and Future Prospects		<b>1 (August 2011)</b>
	<b>3</b>	<b>2</b>

The panel discussion was a well-attended event. A university wide invitation was sent out. GSU faculty and students attended and participated in the discussion

#### **D. AYSPS-DOE-FEPS Faculty Exchange**

The Partnership included a component for CU scholars to conduct research on GSU campus. This was designed to promote self-directed learning and capacity development. During implementation, due to high interest shown by FEPS faculty, the scope of the activity was enlarged to include 7 CU faculty members in place of the planned three. A call for participants was sent out at Cairo University and faculty who were interested sent for their research preferences. These were then jointly aligned with research interests and resources at GSU to arrive at the final group.

<b>Faculty Exchange</b>	<b>Direct Beneficiaries</b>
Batch 1	<b>2</b>
Batch 2	<b>4</b>
Batch 3	<b>1</b>
	<b>7</b>

Seven DOE-FEPS faculty members, some of whom were working on joint-research publications visited GSU. Originally, the Partnership provided for 3 faculty visits only. The Partnership generated high interest in visit to AYSPS and participation in the scholar exchange component to directly benefit ongoing research of DOE-FEPS faculty. In order to accommodate the increased demand, the visit durations was adjusted to create space for 8 visits. Under the joint research component, arrangements were made for 7 DOE-FEPS faculty members for one to three month travel and work at AYSPS with assigned co-authors from GSU faculty or work on their own research seeking support from GSU faculty. One CU faculty member dropped out in the end and could not come for personal reasons. The arrangements were finalized and 7 FEPS faculty members traveled according to the following schedule:

#### **First batch: June 15th 2011- July 10th 2011**

1. Manal Metwaly: Professor of Economics/Director Center for Fiscal and Economic Research Studies
2. May Gadalla: Assistant Professor, Statistics

#### **Second batch: July 24 – August 20, 2011**

1. Lobna Mohamed Abdel Latif Ahmed - Chair and Professor
2. Nagwa Abdalla Abdelaziz Samak - Professor of Economics
3. Mona Esam Osman Fayed - Assistant Professor of Economics
4. Hanan Hussein Ramadan Nazier - Assistant Professor of Economics

**Third batch: July 28 to October 26, 2011**

1. Amirah Moharram Saleh ElHaddad - Associate Professor of Economics

**The DOE-FEPS faculty members' visits overlapped with two AYSPS policy courses namely:**

Public Budgeting & Fiscal Management

July 25 - August 5, 2011

Tax Policy, Fiscal Analysis & Revenue Forecasting

August 8 - 19, 2011

The CU members who attended the courses were:

1. Dr. Lobna Mohamed Abdel Latif Ahmed
2. Dr. Nagwa Abdalla Abdelaziz Samak
4. Dr. Mona Esam Osman Fayed
5. Dr. Hanan Hussein Ramadan Nazier

**Curriculum Development Meetings**

The visiting DOE-FEPS faculty members requested for subject specific meetings with GSU faculty. These were arranged. The meetings resulted in helping DOE-FEPS faculty upgrade their syllabi using GSU syllabi and faculty advice. New textbooks were suggested and provided as samples for teaching graduate and undergraduate courses in public finance, macroeconomics and econometrics.

**Capacity Building in Econometrical Analysis Skills**

The visiting DOE-FEPS faculty members requested for specific guidance on research questions and GSU faculty members responded by giving guidance on specific questions relating to econometric methods to benefit ongoing work at DOE-FEPS. Responding to the interest of visiting DOE-FEPS faculty members, a special module for use of STATA for econometrics was organized. Four visiting CU faculty members attended the module. One visiting faculty member attended an ongoing econometrics course

**E. Master's Program**

Mahmoud Abduh Ali Elsayed (formerly research staff at CU) was enrolled in the MA in Public Policy Program at AYSPS, GSU from January 2012 till May 2013. This component, partially financed by GSU currently includes one Master's (Public Policy) student from the University of Cairo, Mahmoud Abduh Ali Elsayed. He was a teaching assistant, a member of junior faculty at University of Cairo before joining this program at GSU. This program component was geared toward building capacity for future faculty at CU and upgrading their research skills. Mr. Mahmoud Elsayed used this opportunity to complete his masters degree and develop his knowledge and research methods for application to public policy issues in Egypt. He did return to Cairo University upon the completion of his program as per his agreement with CU but applied for a PhD program at GSU as well. Therefore, he is now back at AYSPS, GSU with full knowledge and awareness of Cairo University to complete his PhD program and intends to return to Cairo after obtaining his degree. CU is happy about this development and is encouraging of further skill building for Mahmoud.

## **F. Additional Activity**

### **Tax Experiment**

The “Implications of Trust in Government on Tax Compliance in Egypt” experiment was conducted at Cairo University. This research was designed to understand the behavioral aspects of taxpayer’s decisions to comply with the tax system, something that is critical to the success of the public finances of the country and new government. Sarah Mansour, a participant in the GSU Cairo courses and junior faculty at University of Cairo traveled to Atlanta to pilot the experiments in January 2013 at GSU. She visited for 9 days. Dr. Wallace and Krawee Ackaramongkolrotn travelled from March 15-22 and conducted the experiment while also demonstrating the methodology, which is new to CU. The experiment thus included training Ms. Mansour about the methodology of design and conduct of field experiments in economics. The group ran 9 sessions with 30 subjects each, for a total of 270 participants, of whom 195 were female and 75 were male.

The flyer of the experiment was sent out university wide and students at Cairo University were invited to participate in a research study. The purpose of the study was stated as an exploration of the effects of institutions on individual decision-making. Participation required approximately 2 hours of the student’s time. If they decided to participate, they would be asked to make a series of choices. No one (including the researchers) would be able to accord answers to individuals. After making all of these choices, they were asked to complete a survey about themselves. The students were compensated for their time and the amount depended on the decisions that individuals made as well as on the decisions of others in their group, as explained in the instructions to be read before the experiment took place. More details about announcements, instructions, consent forms as well as a summary presentations can be found in the appendices.

### **Protocol for Ethical Research**

In addition, the University of Cairo had asked GSU for assistance in developing a protocol for ensuring sound ethical treatment in research. Cairo had no Institutional Review Board or Conduct of Research code. GSU assisted Cairo University with materials and training regarding methods of responsible conduct as the experiments are conducted.

- G. **Website Redesign** –FEPS Labs Units and Technology Clubs agreed to design and construct a web-based resource center. A platform was to be built for faculty, student, and other stakeholders’ information exchange and instruction/resource material. This web-based resource area would serve as a knowledge exchange forum between university faculty, local officials, and graduate students throughout the life of the project and beyond. This platform would be continuously enhanced and updated as activities and information is made available. Further, output from various activities would be disseminated on the website of the partnership to serve as discussion pieces on economic policy in Egypt and the region, and to provide background materials for part of the joint ‘Economic Policy Conference and Training’ to be held in Cairo at the end of the project. The FEPS Lab Units & Technology Clubs consulted specialists and faculty members, taking into account comments sent by GSU, and browsed other international and local websites in order to achieve the above stated objective.

GSU provided a detailed document, including suggestions and observations based on widely accepted best practices in the web design community. These were guidelines that would help FEPS to build a highly accessible, well organized, and aesthetically pleasing website. As always, an organization's situation and context dictates what decisions will be made with regards to the overall design of the site. However, by adhering to these simple guidelines, the teams have created the basis for an easy to use website that facilitates an enjoyable user experience.

The final template that was shared with GSU before the new site was finalized can be found on this link

<http://www.fepslutc.org/Sitetemplate/index.php?&width=2560&height=1440>

**a) Description of significant challenges to implementation and how those were addressed (e.g. language barriers, security issues, other).**

Decision Making and Implementation Process:

GSU and DOE-FEPS have engaged in transparent and meaningful discussions from the very inception of this collaboration. GSU has made every effort to be flexible to the needs of DOE-FEPS while keeping in compliance with USAID/HED rules. The initial period of the project (for approximately a year after inception on September 2008) required some adjustment because DOE-FEPS went through leadership changes and priorities were re-assessed. The proposal went through several amendments in the first year (mostly 2009) and this was a learning process for all involved in the activity, including HED but we established a communication protocol after which things ran more smoothly. The technical activities and financial priorities were revisited and revised on several occasions to best meet the objectives of the collaboration and requests made by DOE-FEPS. Based on needs expressed by DOE-FEPS, additional training programs and visiting scholars were added amongst other activities. Many of these activities had been included in the initial proposal and budget, taken out and put back in based on CU-FEPS requests. Budget modifications were limited to once in 6 months after the first year of the project, which led to smoother functioning of the collaboration. In retrospect clear lines of communication and a protocol regarding modifications for such partnerships should be set early on and it would probably be best if HED/USAID set the tone for that. In addition to these issues, the recruitment of the Master's student was a challenge. Cairo University sent out several calls for students to join the Master's program at GSU. The student would receive a full tuition waiver from GSU and a stipend of \$5,000 per year. Even though we consider this a generous offer for a state university, it is understandable that many of the students from Cairo would require additional financial help since they would already be at a disadvantage with the exchange rate. Cairo University also added additional funds to the pool but even then we only had one applicant for the Master's program. This could be attributed to the turbulent political situation in Egypt as well as lack of funds. Given GSU's experience with Master's program, we believe it is very difficult to make such programs work without a substantial financial undertaking. We're, however, very pleased that we could identify a student who had the means and ability to get through the Master's program.

When the Egyptian revolution began, we were all very concerned about delays. The faculty exchange programs began a few months later than we had initially planned. The faculty whom we engaged in co-authoring papers were also overwhelmed by the political upheaval in Egypt, which led to some delays in the finalizing of research and papers. It was inevitable that our counterparts at CU would be affected by the revolution but fortunately our partnership did not suffer from extensive delays or obstacles. This is testimony to the perseverance of faculty at CU who continued to function and deliver, in spite of such trying times.

Despite the initial learning curve and other challenges GSU and CU-FEPS have established a wonderful relationship and activities such as the, “Tax Experiment” implemented by GSU at the CU campus in 2013 developed organically as a result of the research collaborations between colleagues across the two campuses.

#### Implementation In Accordance With USAID Protocol:

We followed implementation of the exchange visitors training program in accordance with USAID’s ADS Chapter 252 - Visa Compliance for Exchange Visitors and ADS 253: ADS Chapter 253 - Participant Training For Capacity Development. Processing of exchange visitors visas and other related activities proved to be extremely time consuming and very labor intensive to administer and required extensive program coordination efforts from Georgia State University as well as locally in Egypt. Indeed the full scope and requirements of such administration were underestimated at program conceptualization. Furthermore, it took some time and further training in Washington DC to properly understand the full scope and requirements of the requirements in the context of the USAID protocol. Appointment of local program coordinator in Cairo of Ms. Marian Adel was a very critical addition to the project team, which helped to smooth out the various wrinkles in the processing of the various administrative functions, and served as an effective liaison between GSU in Atlanta, Cairo University and the USAID mission in Cairo.

There were some initial misunderstandings of the flow and details of various supporting documentation for the visa approval process but these were eventually sorted out. There was some frustration by the visiting professors in the inordinate protocol required just to produce the all-important DS2019 documentation needed in advance of the visa application interviews. It is also fair to say that cooperation from the USAID mission bore some challenges in that internal communication/protocol issues at the USAID Cairo mission complicated the approval process. There were some inconsistencies in required data and information needed by mission officials from one exchange visitor group application to the next. The problems were basically addressed through considerable coordination, diplomacy and dedication, as we were committed to achieve the project goals within the targeted timeframes. This also affected the processing of J-1 visa for masters student Mahmoud Abduh El Sayed to the point where, due to the arduous documentation requirement and time needed to process, his program was put back one semester.

#### Program Coordination and Logistics:

A major component of the successful implementation was through timely and detailed attention to logistics. Such support came from GSU, Cairo University, HED, the USAID mission and the USAID office in Washington.

The approval process for the visas for the exchange visits by the professors from CU took longer than expected and their arrival got pushed back to the onset of the summer semester. The group's arrival to Atlanta was also affected by the Arab spring revolt in January, which in one instance, resulted in the re-scheduling of visits of two professors at the very last minute, after all arrangements for their departure had already been confirmed. The timing of arrival affected availability of some lodging options in Atlanta. Some professors arrived in Atlanta during the summer semester, which may not have been the ideal time to maximize faculty interaction. These challenges were met by flexibility and increased efforts on the part of GSU faculty and project support staff. Another positive was that the timing allowed the visiting professors had the opportunity to attend our annual public policy training program.

There were various challenges imposed by communication modes, distances and time zones separating the different support centers. For example the most economical communication (besides email) deployed between GSU and our program coordinator in Egypt was through Skype, but it was not the most expedient means of communication. Various sacrifices were made on both ends in terms of getting to locations and communicating across time zones by program management. The program coordinator in Egypt must be commended for her many late evening meetings and her physical presence at the USAID mission office and Cairo University to push through various issues and ensure we met the goals set.

#### Safety and Security:

Safety and security was a major concern, which affected everything from the protocols of visa processing to lodging in Cairo and Atlanta. These resulted in extra precautions and in some cases, additional costs. In keeping with the USAID requirements, participants had to be vetted appropriately before visas could be approved. As far as lodging was concerned, particularly in Cairo, we had to be careful that there were reasonable measures in place for the safety and security of visiting faculty. This restricted the hotels which we could use and of course affected the accommodation costs. HED helped arrange for preferred/US Contractor rates at the hotel we used. For the visiting professors to Atlanta, we had to provide appropriate accommodation and logistics, which would provide a safe environment and one conducive to productivity during their stay. This also meant there were additional resources deployed to attend to their needs. Cairo University must also be commended for their organizational efforts in providing a safe environment and with attention to detail of logistics during the organization of the training workshops, conferences and meetings.

#### Additional Requests:

Throughout the project there were additional requests for various activities which were not initially considered, for example regarding various software, number of visiting professors, additional research etc. These were accommodated but required more dedication to allow these to be still done within budget and extra flexibility particularly on project management.

- b) Photographs and additional information that help describe and promote the partnership are encouraged.

## Language and Communication

We were concerned about language barriers, especially with the delivery of training programs, seminars and conferences

Trainings programs delivered at CU – GSU faculty members mentioned that there were always 1 or 2 faculty members in the training programs who's English was poor. This is typically the case for all the programs that we at GSU have delivered. Although, we collect information beforehand about language fluency, participants sometimes overestimate their ability to get through such courses and it is not financially viable to hire translators when only one or two people out of large groups have difficulty with the language. Our faculty tried their best to address questions outside of training hours and provide additional assistance to participants who had difficulty understanding. Also, CU faculty who are fluent in the both English and Arabic were present to help get through any translational issues.

Tax Experiment – Most of the CU students did not understand English so GSU paid to get translations of all documents in Arabic, which we have included in the appendices. Sarah Mansour, faculty at CU, conducted the entire experiment in Arabic so that the students would understand everything clearly. She had already been trained by GSU faculty beforehand about the specifics of delivering the experiment and these GSU faculty members were physically present if she had any additional questions or concerns.

Visiting faculty and Co – Authorship – The visiting faculty from CU and Co – Authors had excellent command on English and we faced no language barriers for these activities of the partnership.

### **f) Conclusion (2-3 pages)**

HED will be looking to your report for insights that can be shared with higher education audiences seeking to formulate and/or improve their own policies and practices related to development-focused partnerships. The concluding section of your report should include:

a) Summary of the key lessons learned and advice for future implementers.

The key lessons learnt from the Partnership are:

- (1) There should be sufficient flexibility in program design to build on emerging opportunities in the partnerships;
- (2) Such Partnerships have long term effects and therefore they should be conceived and implemented for a longer term horizon;
- (3) Sufficient resources should be available as seed grants for joint research programs. Such provisions could promote meaningful and long term relationships between faculty and also leverage larger amounts of funds from research grant windows.
- (4) Faculty exchange visits should be of a longer duration allowing CU faculty to have at least a complete semester at GSU. This would help them participate in advanced courses on campus.

b) Analysis of how the HED partnership has affected policies and practices at both U.S. and host country partner collaborating institutions.

GSU faculty has developed a focus on Egypt. The faculty members aim to continue working with colleagues from CU and build on existing relationships to work on additional research projects. This was expressed and formalization in a MoU during the final seminar at CU. CU faculty has strengthened their analytic methods. The public economics curricula were reviewed with GSU

faculty and upgrades were made. New teaching tools and methods were reviewed at GSU. CU faculty and FEPS center leaderships had detailed discussions with GSU faculty and center directors and exchanged notes to increase their fund raising programs and enhance their regional outreach for public policy programs. The effects of these exchanges on practices will be seen in the coming years.

- c) Discussion of whether or not your institutions will continue to collaborate and, if so, how.

GSU and CU faculty have found the joint research projects as mutually beneficial. The two institutions agree on the value of continuing cooperation. In this regard, a formal MoU was signed between Dean Walker (GSU) and Dean ElSaid (CU) to continue cooperation between the two institutions. A copy is attached in the Appendix. GSU and CU faculty intend to work on joint research projects involving field experiments and apply for research funding.

- d) Discussion of the prospects for sustainability as well as future opportunities.

The gains from the Partnership will be sustained as follows:

- (1) GSU faculty is likely to collaborate with CU faculty on research projects
- (2) GSU and CU faculty have discussion research collaboration
- (3) The new analytics methods will continue to benefit junior CU faculty participants of trainings
- (4) The institutional capacity for use of STATA and experimental methods for research has been established; these will be used according to CU faculty initiatives. Given the research activities at FEPS, the facilities will be of high interest to faculty.

In order to sustain the gains from the Partnership and build upon them, a follow up project should be implemented. The follow up should benefit from the lessons learnt during the Partnership and provide adequate funding for collaborative research, training and adequately faculty exchange visits.

## **g) Appendices**

Please attach any documents that provide relevant supporting information about your discussion of your partnership in this final report. Examples might include, but are not limited to:

- a) Any relevant press releases, news stories or articles published about the partnership
- b) Additional partnership photos
- c) Copies of published articles or books written as a result of the partnership
- d) Additional information that highlights the partnership's accomplishments such as success stories

## **Submission and Dissemination**

Please submit an electronic copy to your primary contact at HED.

HED will share partnership final reports with colleagues at USAID. At the discretion of USAID, final reports may also be distributed to other individuals in the development and higher education community. Final partnership reports allow HED to highlight partnership success, educate the public about our programs, and demonstrate the impact higher education projects have on peoples' lives around the world. Given that reports are intended for broad dissemination, please ensure that your report is comprehensive, informative, and of high professional quality. Reports must be compliant with HED and USAID Branding and Marking requirements as described in

agreements between your institution and ACE/HED. HED will ask partners to revise final reports that are incomplete, and reserves the right to hold payment of the last partnership invoice until a final report which meets these guidelines is received.

## Appendices

1. Photos
2. Publications- HED – Jul/Aug 2013
3. Publications – Andrew Young School. The Briefing, Winter 2013
4. Publications – Andrew Young School. The Briefing, Winter 2012
5. Andrew Young School Deans ENews March 2012
6. Seminar Presentation, Manal Metwaly, June 2011
7. Research Papers
8. Public Economics Course Outline
9. Financial Econometric Course Outline
10. Agenda – Macro-Economic Policies and Growth in Egypt Seminar and meetings
11. Tax Experiment
12. Partnership Concluding Conference Invitation
13. Partnership Concluding Conference Agenda
14. Concluding Conference Project Presentation
15. Memorandum of Understanding: Cairo University and GSU, AYSPS



Concluding conference June 25 2013, Cairo University. Dr. Mary Beth walker (GSU) and Dr. Hala El-Said (CU)



Concluding conference June 25 2013, Cairo University Dr. Mary Beth Walker (GSU) and Dr. Hala El-Said (CU)



Concluding conference June 25 2013, Cairo University - Dr. May Gadalla (CU) and Dr. Mary Beth Walker (GSU)



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Concluding conference June 25 2013, Cairo University - Dr. Mary Beth Walker (GSU) and Dr. Hala El-Said (CU)



Concluding conference June 25 2013, Cairo University - Dr. Manal Metwaly and Dr. Lobna Ahmed (CU)



Concluding conference June 25 2013, Cairo University Mahmoud Elsayed, Dr. Manal, Metwaly and Dr. Lobna Ahmed (CU)



Concluding conference June 25 2013, Cairo University Dr. Manal, Metwaly and Dr. Lobna Ahmed (CU)



Concluding conference June 25 2013, Cairo University - Mahmoud Elsayed, Dr. Lobna Ahmed, and Dr. Manal Metwaly (CU)



Concluding conference June 25 2013, Cairo University - Dr. Musharraf Cyan (GSU) and Dr. Lobna Ahmed (CU)



Concluding conference June 25 2013, Cairo University- Dr. Musharraf Cyan (GSU) and Dr. Lobna Ahmed (CU)



Concluding conference June 25 2013, Cairo University - Dr. Musharraf Cyan (GSU) and Dr. Lobna Ahmed (CU)



Concluding conference June 25 2013, Cairo University - Dr. Manal Metwaly (CU)



Concluding conference June 25 2013, Cairo University - Dr. Manal Metwaly (CU)



Concluding conference June 25 2013, Cairo University -Dr. Mary Beth Walker (GSU), Dr. Hala El-Said, and Dr. Wafaa El Cherbini (CU)



Participants to Seminar: Macroeconomic Policies and Growth in Egypt: Policy Options, Jan 17 2012



Participants to Seminar: Macroeconomic Policies and Growth in Egypt: Policy Options, January 2012



Participants to Seminar: Macroeconomic Policies and Growth in Egypt: Policy Options, January 2012



Participants to Seminar: Macroeconomic Policies and Growth in Egypt: Policy Options Jan 17 2012



Participants to Seminar: Macroeconomic Policies and Growth in Egypt: Policy Options Jan 17 2012



Participants to Seminar: Macroeconomic Policies and Growth in Egypt: Policy Options Jan 17 2012



Andrew Feltenstein at Macroeconomic Policies and Growth in Egypt with Jeffrey Condon (GSU) (seated on panel, far left) and Manal Metwaly, Cairo University (seated on panel, second from left), January 2012



Dr. Richard Luger (GSU) with Financial Econometrics course participants January 2012



Dr. Sally Wallace (GSU) with Public Economics course participants

**First row:** Hoda Youssef, Israa Adel El-Sayed Ahmed, Heidi Aly Aly Fahmy, Pakinam Mahmoud Mohamed Fikry, Sarah Adel Ibrahim Mansour

**Second row:** Lobna Ahmed, Marian Adel Wanis, Amirah Moharram Saleh El-Haddad



Dr. Richard Luger with course participants including Cairo University Faculty, January 2012



Dr. Sally Wallace (GSU) with Public Economics course participants, January 2012



Visiting Professors from Cairo University To Andrew Young School, Georgia State University, Summer 2011.

L-R: Mona Esam Osman Fayed, Nagwa Abdalla Abdelaziz Samak, Hanan Hussien Ramadan Nazier, Amirah Moharram Saleh ElHaddad, Lobna Mohamed Abdel Latif Ahmed. Missing: Manal Metwaly, May Gadalla, who had returned earlier.



Dr. Susan Laury (GSU) with participant at Faculty Training Program in Experimental Economics, April 2009



Participants at Faculty Training Program in Experimental Economics, April 2009



Dr. Susan Laury (GSU) with participants at Faculty Training Program in Experimental Economics, April 2009



**Higher Education  
for Development**  
*Knowledge, Partnerships, Results*

## Education Partners Shape Shared Vision of Gender Equality and Women's Leadership



*Speakers at the opening plenary of the Women's Leadership Program Partners Meeting include (l-r) Terry W. Hartle, senior vice president, American Council on Education; Peter Malnak, mission director, USAID/Rwanda; and Henriette Umulisa, permanent secretary, Ministry of Gender and Family Promotion.*

More than 60 partners from higher education institutions in Armenia, Paraguay, Rwanda, South Sudan and the United States gathered in Kigali, Rwanda to discuss strides and challenges in gender equality and women's leadership in the targeted countries in Europe, South America, and Africa.

USAID and HED hosted the inaugural Women's Leadership Program Partners Meeting July 22 to 25 under the theme, "A

**July/August 2013**

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**Featured Partnership: Indiana  
University / University of the  
West Indies**



Photo courtesy of Indiana University  
*Shakita Payne and Ebony Kellman  
are co-founders of Make-Up Doll  
Cosmetics.*

Barbados has a recognized risk-averse business culture, and entrepreneurship development is considered central to the country's efforts to achieve prosperity and competitiveness. With a declining agricultural economy and an unpredictable tourism industry, investing in a spirit of entrepreneurship and small business development among Barbadian citizens can be a valuable tool for economic growth. Unfortunately, a lack of educational resources and funding often hinder Barbadians from starting and expanding their

Shared Vision for Promoting Women’s Leadership Through Higher Education.” Honored guests included Peter Malnak, mission director, USAID/Rwanda and Henriette Umulisa, permanent secretary, Ministry of Gender and Family Promotion. “When you educate a girl, you educate a whole nation,” Umulisa told attendees during a plenary session.

The [Women’s Leadership Program](#) is supporting access of women to higher education and advanced degrees, strengthening institutional capacity in research and education on women’s leadership, and promoting women’s leadership through higher education extension/outreach efforts in underserved communities in the four countries.

Check out photos from the meeting on [HED’s Facebook page](#).

## Georgia State University and Cairo University Partnership Yields Strong Link and Results



businesses. But the Barbados: Supporting Entrepreneurs through the JOBS Initiative—a USAID-funded and HED-managed Indiana University (IU) and University of the West Indies (UWI) Cave Hill School of Business collaboration—aims to create new business opportunities for Barbadian entrepreneurs and offer strategies to strengthen their businesses.

Barbadian entrepreneur Shakita Payne desired a more international presence for her business, Make-Up Doll Cosmetics, which produces eye shadow and lipstick among its line of products. While Payne had achieved success, she needed guidance in order to expand her business and craft a stronger brand that could penetrate the global marketplace. A diverse team of UWI and IU students assisted Payne to make her objective a reality while applying their own entrepreneurship knowledge and skills in the process.

The students conducted market research, surveys and analyzed competing local and international industry leading cosmetics brands to learn what Barbadians expected from their cosmetics. “We had to learn what Barbadians wanted out of their makeup in order to provide the best consultation,” said Jenelle King, a UWI Cave Hill School of Business student. King wanted to ensure the advice given to Payne would be applicable to Barbados, and, more importantly, King wanted a chance to apply the lessons she had learned in her business classes. “Putting book work into practice on an actual idea that involved people’s money and time is what I learned from this partnership,” added King. “The stakes were higher. It was not just to get a passing grade, but someone’s future was in our hands.”

Payne’s future was in the students’ hands, and she immediately applied their recommendations to her business. “For us, we thought when consumers heard MUD Cosmetics,

Photo by Hazel Cipolle, HED

*Dean Mary Beth Walker of Georgia State University's Andrew Young School of Policy Studies and May Gadalla, assistant professor of statistics at Cairo University's Faculty of Economics and Political Science, presented their joint research in June titled "Outcomes-Based Assessment of Supplemental Tutoring in Egypt: Evidence from the Egypt Labor Market Panel Survey."*

In less than five years, Georgia State University's Andrew Young School of Policy Studies (AYSPS) and Cairo University's Department of Economics, Faculty of Economics and Political Sciences (DOE-FEPS) realized their goal of enhancing academic outreach and applied research capacity in economics.

On June 25, representatives from both schools met at Cairo University for a final conference to present joint achievements reached during the [HED partnership](#).

"The partnership was able to accomplish much more than the originally planned activities including three training courses for Cairo University faculty in state-of-the-art analytic techniques, which they can use to augment their research," said Dean Mary Beth Walker of Georgia State University.

Activities also included student and faculty exchanges of eight individuals, and several joint research papers and seminars.

Rather than a conclusion of the collaboration that began in late 2008, the event solidified a willingness to continue their work together. "We at AYSPS look forward to completing the research we have begun with our excellent colleagues at FEPS," Walker added. "We hope to welcome visiting scholars from FEPS in the future, and will look for new opportunities to teach and engage in joint research at Cairo University."

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## **Study Examines Leadership Challenges at African Higher Education Institutions**

they would think about Make-Up Doll. But [the students'] research showed us that isn't so," Payne said. She was unaware of the disconnect between the branding of her cosmetics and the needs of the customers. However, Payne's open-mindedness to the students' suggestions allowed her to integrate some bold new ideas into Make-Up Doll Cosmetics.

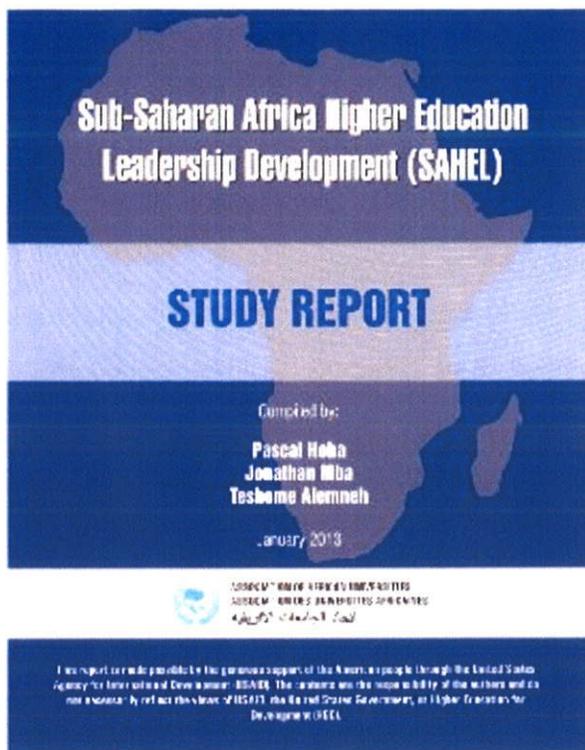
Payne reimagined the packaging and marketing of her products and changed the logo to enhance the cosmetics line's appeal to local and international consumers. To further entice global consumers, she sent cosmetics to makeup artists in the United States, the United Kingdom and countries in the Caribbean region. She used social media to promote her products by posting pictures, videos and reviews on the official Make-Up Doll Cosmetics Facebook page. She then integrated PayPal into her website, which allowed international customers to buy products in a secure manner.

Payne says she is grateful for the consultation from the partnership and credits the students for her ongoing success. "The [student engagement project] taught me a lot I did not know, and I don't think [Make-Up Doll Cosmetics] would be where we are today with rebranding and marketing if not for the [UWI /IU] consultation," she added.

[Read the partnership profile for more information.](#)

### **Video Shares Value of HED's Work and Results**

HED is at the center of higher education and international development, linking institutions to deliver innovative solutions to global challenges. From providing technical assistance to managing partnerships, HED is engaged in advancing development through higher education. [Watch this brief video](#) to learn more about HED's role in higher



A study by the Association of African Universities (AAU) commissioned by USAID and HED concludes that poor leadership, governance and management across African higher education institutions inhibit their growth and sustainability.

The *Sub-Saharan Africa Higher Education Leadership Development (SAHEL) Study Report* maps a strategy for institutional capacity building in senior- and middle-level management and leadership for sub-Saharan African higher education institutions.

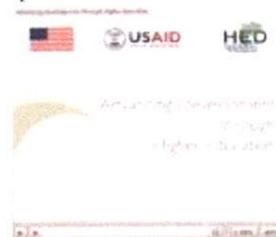
AAU and HED presented the findings during AAU's 13th General Conference held in Libreville, Gabon in May.

Download the [SAHEL Study Report](#) here.

## IIE White Paper Highlights BMENA-U.S. Community College Initiative Partnerships

The Institute of International Education recently explored two

education and international development.



### Call for Consultants with Expertise in Performance Evaluation and Sustainability Assessment

HED is seeking two qualified candidates to conduct a performance evaluation and facilitate sustainability strategy sessions for two small business development networks in Honduras and Costa Rica.

[Learn more about the project and how to apply.](#)

### USAID Funding Opportunities (Non-HED)

HED has posted several Requests for Proposals or Requests for Applications from the U.S. Agency for International Development to its website. Please correspond directly with the contact person identified in each announcement if you have any questions.

To learn more about these funding opportunities, click [here](#).

### U.S.-India Institutional Partnership Grants Available

The United States-India Educational Foundation recently announced an open competition for partnership grants under the Obama-Singh 21st Century Knowledge Initiative. The application deadline is Nov. 1, 2013.

To learn more about these funding opportunities, click [here](#)

partnerships from HED's Broader Middle East and North Africa-U.S Community College Initiative in its white paper, *The U.S. Community College Model: Potential for Applications in India*. The paper notes the mutual benefits of the international partnerships between Highline Community College in Washington and Mataria Technical College (Egypt), Eastern Iowa Community College and Sana'a Community College (Yemen), and Eastern Iowa Community College and Al Quds College (Jordan).

To learn more, read the [full IIE publication](#).

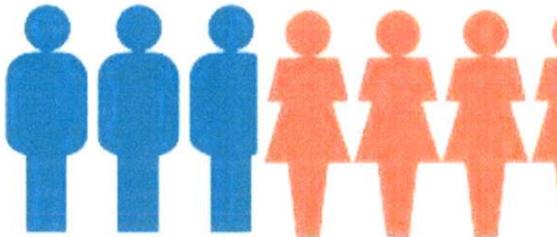
### Share Your News

If you have a partnership update or an upcoming event that you would like to see highlighted in the next HED Newsletter, please send an email to **Lynn Simmonds** at [lsimmonds@hedprogram.org](mailto:lsimmonds@hedprogram.org). Feedback and suggestions for improving the HED Newsletter are also welcome. We look forward to hearing from you!

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## HED Partnerships: Promoting Access in FY2012

**6,206** Underserved or Disadvantaged  
People Accessing Tertiary Education  
Programs in FY2012



Male – 2,893

Female – 3,313

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Higher Education for Development (HED) promotes higher education's engagement in international development through institutional and human capacity building in developing countries. Established in 1997 as the Association Liaison Office for University Cooperation in Development (ALOU), HED assists the nation's [six major higher education associations](#) in partnering with the [U.S. Agency for International Development \(USAID\)](#).

To OPT-OUT of receiving additional information about HED's Partnership Initiatives or to specify which type(s) of information you would like to receive, please follow the "UPDATE PROFILE" link below.

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# Women, Crime and Criminal Justice

Popular annual lecture series attracts top-rated speakers



Students filled rooms to capacity for presentations made by leading criminal justice and criminology academicians and practitioners during the 2012 Women, Crime and Criminal Justice lecture series. Sponsored by the Andrew Young School and the Department of Criminal Justice and Criminology, the series was held two days in March.

Policy topics titled “Three Strikes and You’re Out! What Women have Paid for the Pitch of Criminal Justice Policy Reforms,” delivered by Mona Danner of Old Dominion University, and “Delinquent Girls and Public Policy,” by Margaret Zahn of North Carolina State, were balanced with professional development seminars delivered by Danner and Christine Sellers of the University of South Florida.

GSU alumni Renee Propes, deputy chief at the Atlanta Police Department; Cynthia Padilla, Fulton County Advocate; and clinical assistant professor Cyntoria Johnson, an attorney, stopped the show with stories of their adventures as successful female graduates in criminal justice from Georgia State University.

“After the panel, I spoke with several students who noted that the panel ‘brought their future into light’ and provided ‘an extremely useful and informative’ depiction of what is to come,” says Undergraduate Coordinator and Associate Professor Brenda Blackwell.

For more information on this and other departmental events, go to <http://aysps.gsu.edu/cj/news-events>.



Brian Payne and Mona Danner

## AYSPS builds capacity at Cairo University

**ECONOMICS FACULTY** traveled to Cairo in January to participate in a U.S. Agency for International Development-sponsored project titled “Enhancing Capacity for Research in Economics.” Awarded by Higher Education for Development, the program was delivered by the Andrew Young School’s International Center for Public Policy in partnership with the University of Cairo.

The project was designed to help strengthen the capacity of Cairo University’s Department of Economics in economic research and enhance its outreach to serve as a regional hub for teaching and research. It included the joint hosting of an economic policy seminar and training program in Egypt.

Professor Sally Wallace, who chairs the Department of Economics, arrived at Cairo University to lead a course on public economics to the Egyptian faculty. A week later, Associate Professor Richard Luger delivered a five-day introduction to financial econometrics course.

Professor Andrew Feltenstein and doctoral candidate Jeffrey Condon also presented a seminar, “Macroeconomic Policies in Egypt,” in collaboration with Professor Manal Metwaly of the University of Cairo, formerly an AYSPS visiting scholar.



Andrew Feltenstein (standing) with Jeffrey Condon (seated on panel, far left) and Manal Metwaly (seated on panel, second from left)

## International Center for Public Policy Faculty at Cairo University



Top left, Sally Wallace teaching the public economics course participants in Egypt. Top right, Andrew Feltenstein teaching Macroeconomic Policies and Growth with Jeffrey Condon (seated on panel, far left) and Manal Metwaly, Cairo University (seated on panel, second from left)

The **International Center for Public Policy** has been engaged in a USAID-sponsored project, "Enhancing Capacity for Research in Economics," awarded by Higher Education for Development and delivered in partnership with the University of Cairo. This activity is aimed at strengthening the capacity of Cairo University's Department of Economics in economic research and enhancing their outreach to serve as a regional hub for teaching and research. One of the outcomes of this undertaking included the joint hosting of an economic policy seminar and training program in Egypt.

To fulfill this objective, GSU faculty travelled to Cairo in January. **Sally Wallace**, professor and chair (Economics) visited Cairo University on January 14, 2012, and gave a course on public economics to 19 participants. **Richard Luger**, associate professor (Economics and Risk Management and Insurance), traveled to Cairo on January 22, 2012, to deliver a five-day introduction to financial econometrics course to 31 participants.

**Andrew Feltenstein**, professor (Economics) and **Jeffrey Condon**, Ph.D. student (Economics) delivered presentations in collaboration with Manal Metwaly, a former visiting scholar at Georgia State University who is now a professor at the University of Cairo. They presented a seminar entitled "Macroeconomic Policies in Egypt" on January 17, 2012.

Research Center Focus:  
International Center  
for Public Policy (ICP<sup>2</sup>)



# GLOBALIZING the GSU experience at home and abroad

**THE INTERNATIONAL CENTER FOR PUBLIC POLICY,** (until recently known as the International Studies Program), designs and provides technical assistance and training programs to support fiscal policy reforms in developing and transitioning economies, working with multilateral assistance organizations, foreign ministries, government organizations, legislative bodies and private sector institutions.

Faculty and research associates from the ICP<sup>2</sup> have earned Georgia State University and the Andrew Young School acclaim for strengthening research and management practices in public finance and budgeting around the globe. Following are examples of a few recent ICP<sup>2</sup> programs.



## VISITING FACULTY FROM CAIRO UNIVERSITY ADDRESS THE “ARAB SPRING”

“Unless it can nurture entrepreneurs and create jobs, the popular movement that toppled the dictators won’t make a difference in real lives,” reads an August 22 headline in *TIME* magazine. Although *TIME* was reporting from Cairo, it could have as easily been from an August 8 panel discussion held at the AYS that featured economics faculty members visiting from Cairo University (CU). The panel was led by visiting professor Lobna Mohamed Abdel Latif Ahmed, chair of the Department of Economics, Faculty of Economics and Political Science at CU.

Egypt’s unemployment among college-educated youth is 25 percent according to the economists on the panel. They reported: “Worker remittances are shrinking in the public sector. With 90 percent of all economic activity occurring in Egypt’s three major cities, there are discrepancies on where people live and where the jobs are. There is a mismatch between the types of education provided and the labor skills needed. There’s a collapse in large businesses.



Lobna Mohamed Abdel Latif Ahmed

“There is no confidence between our people and the private sector, our people and the government sector,” a member of the panel continued. “We have to introduce real structural reforms. We need to set up institutions with transparency and meritocracy and push towards this type of governance.”

Ahmed and her peers, Professor Nagwa Abdalla Abdelaziz Samak, Associate Professor Amirah Moharram Saleh ElHaddad; and assistant professors Hanan Hussien Ramadan Nazier and Mona Esam Osman Fayed, visited the AYS this summer and fall under the GSU-CU Partnership for Capacity Enhancement for Economics Research. The program fosters collaboration among AYS and CU faculty that will help build CU’s economics research capacity and aid policy development in Egypt.

The lively discussion described above, “Recent Economic and Political Developments in Egypt and Future Prospects,” the program’s culminating event, was hosted by the ISP and sponsored by the Higher Education for Development and the U.S. Agency for International Development (USAID).

Mona Esam Osman Fayed, left, Nagwa Abdalla Abdelaziz Samak, Amirah Moharram Saleh ElHaddad, and Ahmed

# THE EGYPTIAN ECONOMY POST - JANUARY 25<sup>TH</sup> :CHALLENGES AND THE WAY FORWARD

Manal Metwaly

Professor of Economics

Faculty of Economics and Political Science

Economic Department

Cairo University

June 29<sup>th</sup> 2011

# CONTENT

- ◉ Introduction,
- ◉ The Egyptian Economy before January 25<sup>th</sup> 2011,
- ◉ Social & Economic Consequences of the Revolution,
- ◉ Fiscal & Monetary Responses ,
- ◉ Looking Forward A Head.

# INTRODUCTION

- I. Look backward into developments in the Egyptian economy leading to the crisis,
- II. Evaluate recent social and economic consequences due to the political unrest,
- III. Offer a forward looking vision to secure better future.

# THE EGYPTIAN ECONOMY BEFORE JANUARY 25<sup>TH</sup> 2011



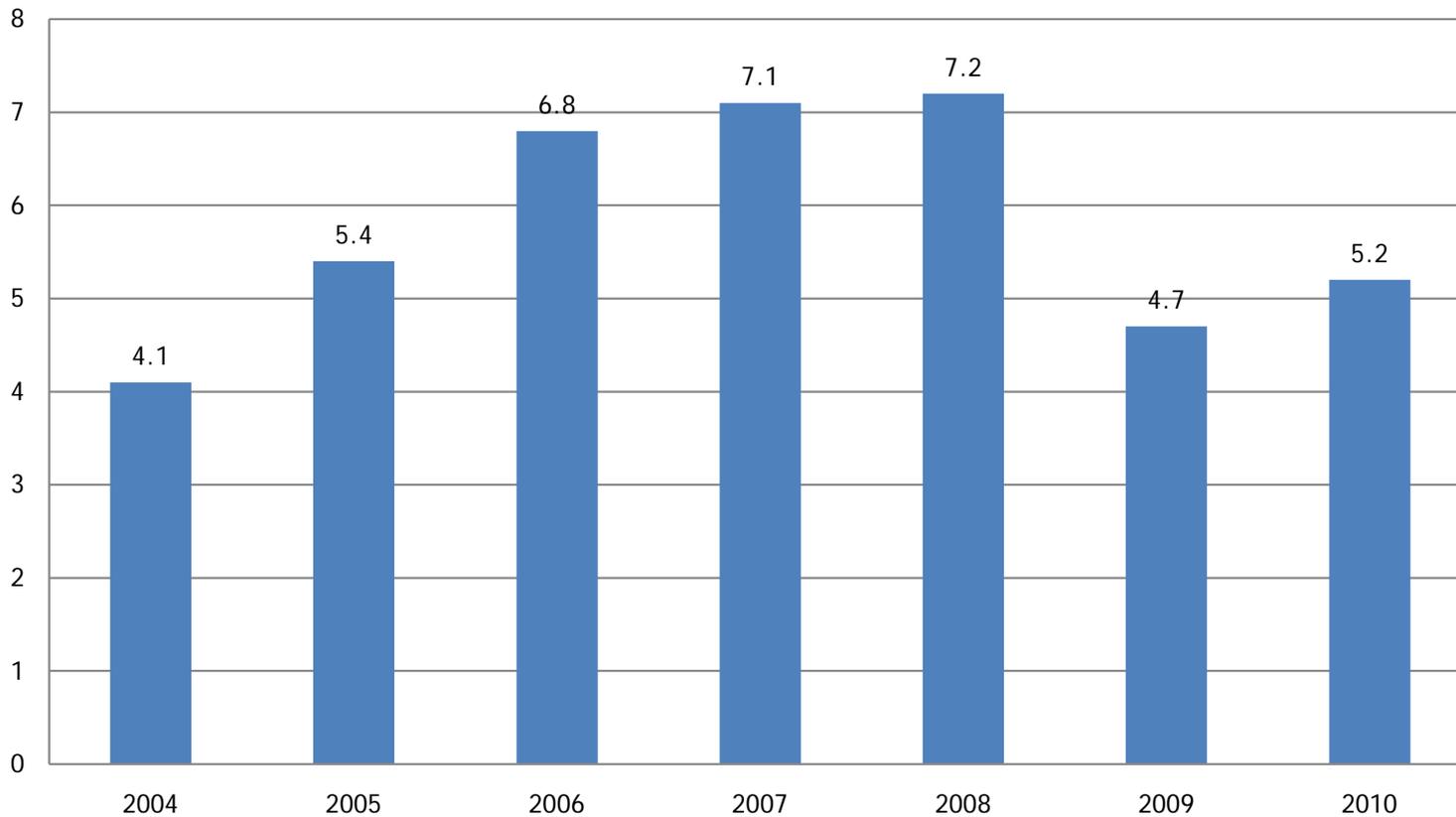
# THE EGYPTIAN ECONOMY BEFORE

JANUARY 25TH 2011 ▸

- ❑ *Real Growth Rate of GDP and Leading Sectors,*
- ❑ *Source of Growth,*
- ❑ *Inflate rate ,*
- ❑ *Investment & Business Climate ,*
- ❑ *Sources of Foreign Receipts,*
- ❑ *Balance of Payments,*
- ❑ *Fiscal & Monetary Policies,*
- ❑ *Labor Market & Social Indicators ,*

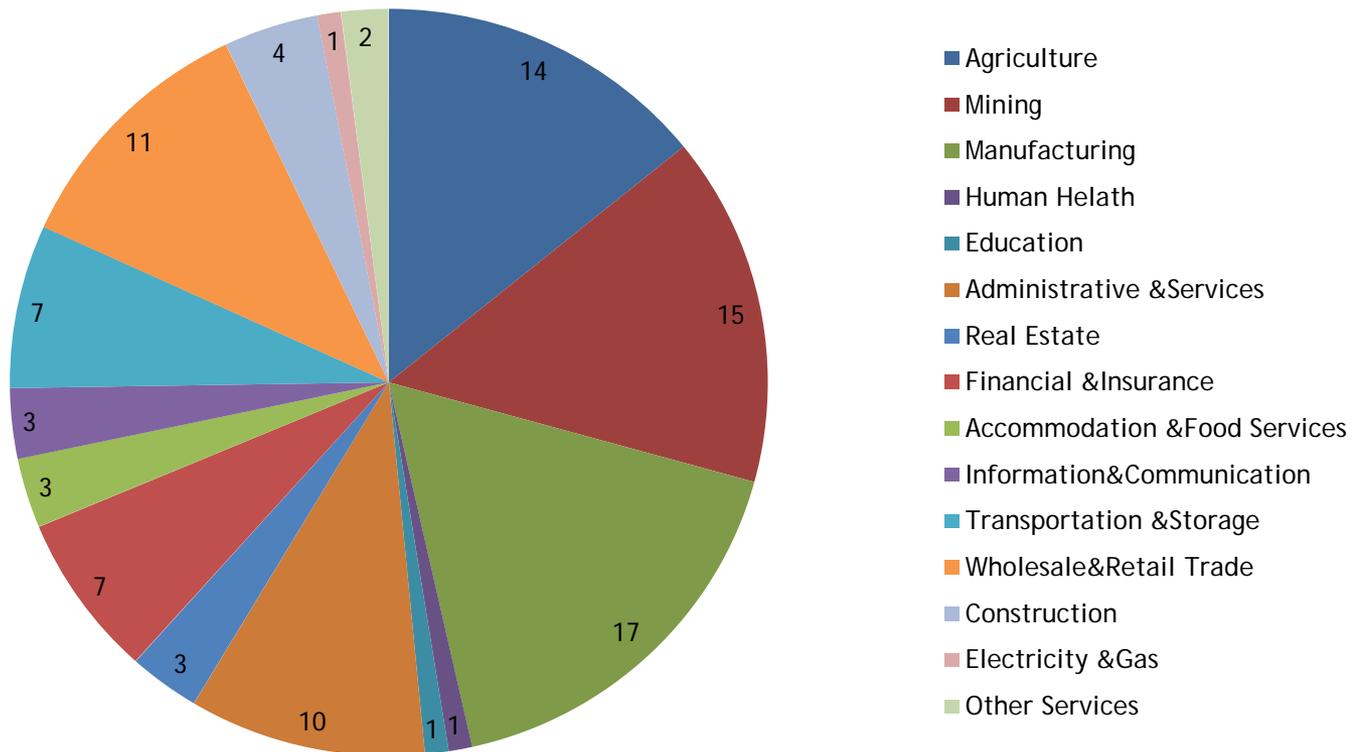
# THE EGYPTIAN ECONOMY BEFORE JANUARY 25TH 2011 (CONT'D)

Annual Growth Rate of GDP



Source: Ministry of Finance , Jan.2011

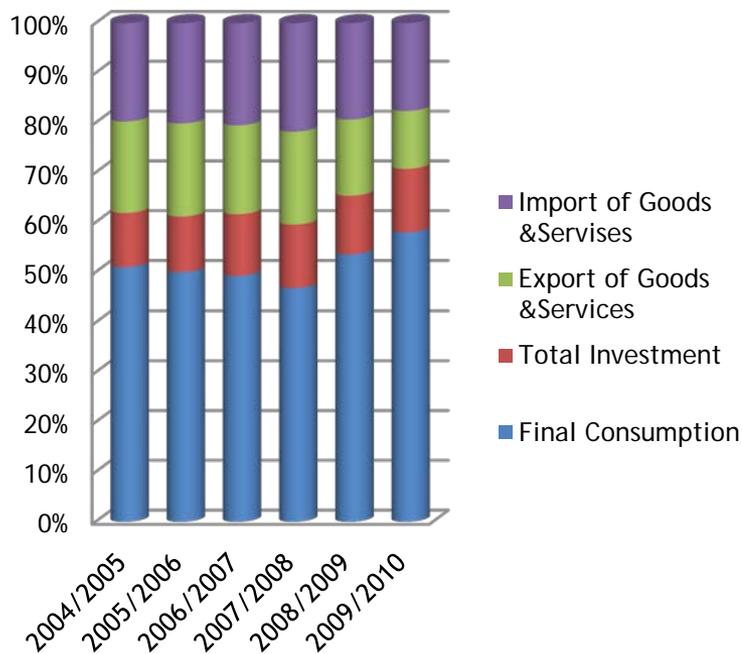
# THE EGYPTIAN ECONOMY BEFORE JANUARY 25TH 2011 (CONT'D): LEADING SECTORS



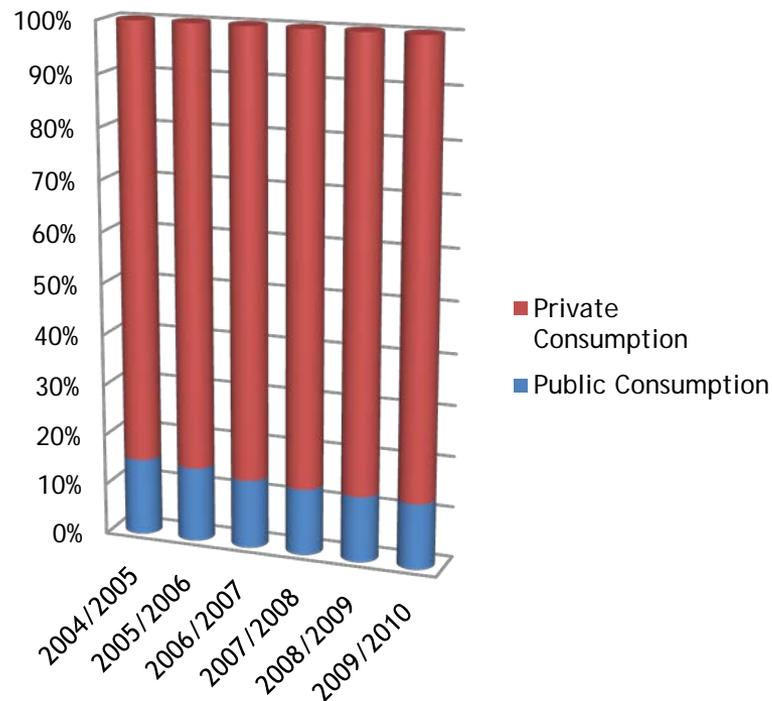
% , 2009 -Source: Ministry of Finance , Jan . 2011

# THE EGYPTIAN ECONOMY BEFORE JANUARY 25TH 2011 (CONT'D): SOURCE OF GROWTH

## Total Demand in Current Prices (EG Billion)



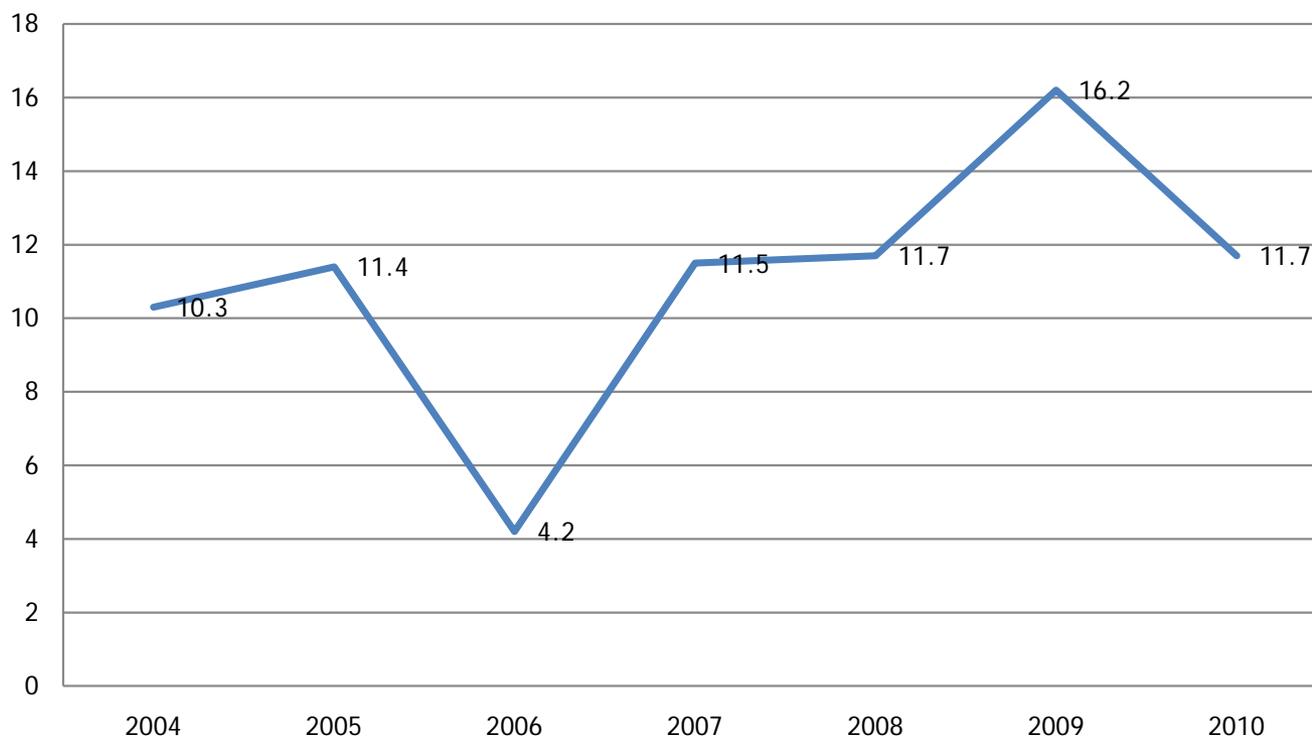
## Components of Final Consumption



Source: Ministry of Finance ,Jan. 2011

# THE EGYPTIAN ECONOMY BEFORE JANUARY 25TH 2011 (CONT'D)

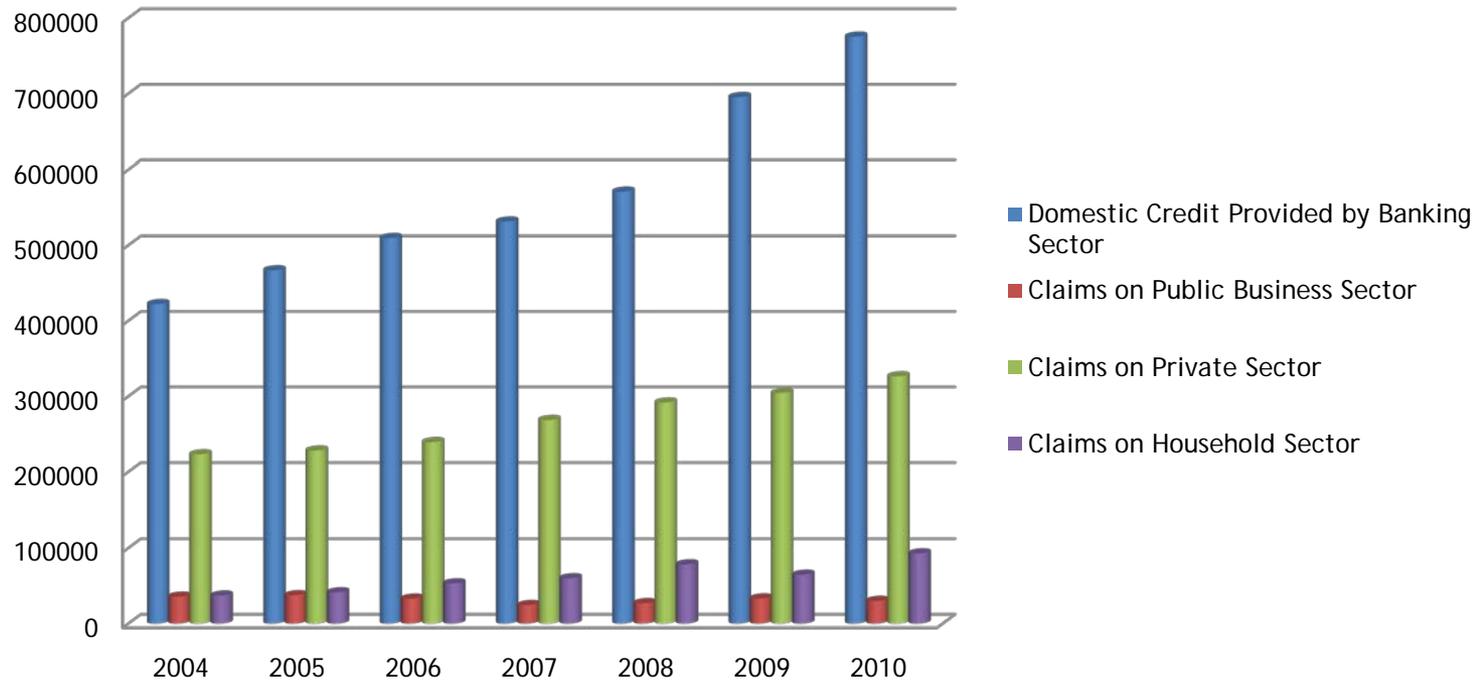
## Inflation Rate(CPI, Urban)



Source: The CBE ,2011

# THE EGYPTIAN ECONOMY BEFORE JANUARY 25TH 2011 (CONT'D)

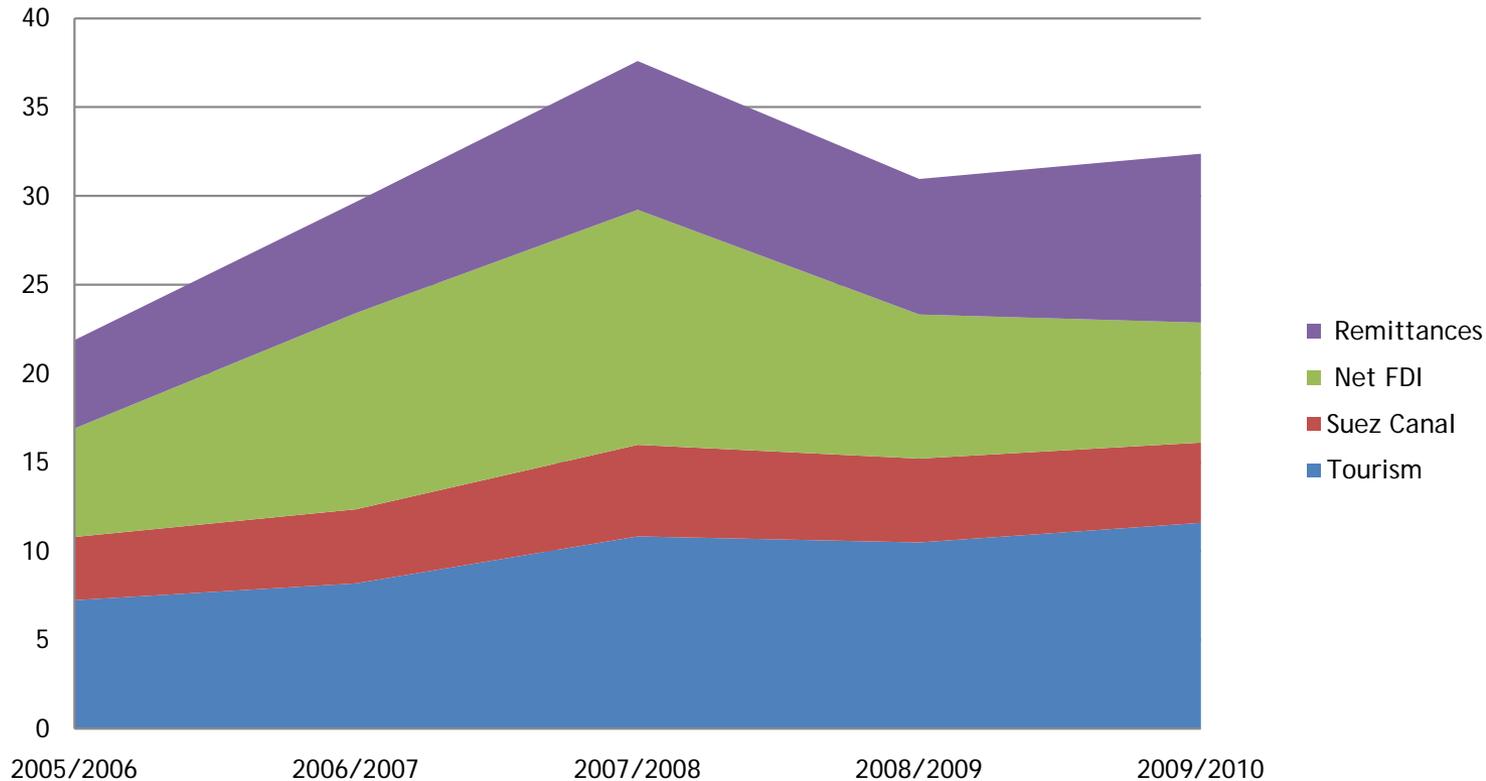
## Credit Indicators (EG Million )



Source: The CBE, 2011

# THE EGYPTIAN ECONOMY BEFORE JANUARY 25TH 2011 (CONT'D)

## Foreign Receipts To Egypt( US \$ Million)



Source: The CBE, 2011

# THE EGYPTIAN ECONOMY BEFORE JANUARY 25TH 2011 (CONT'D)

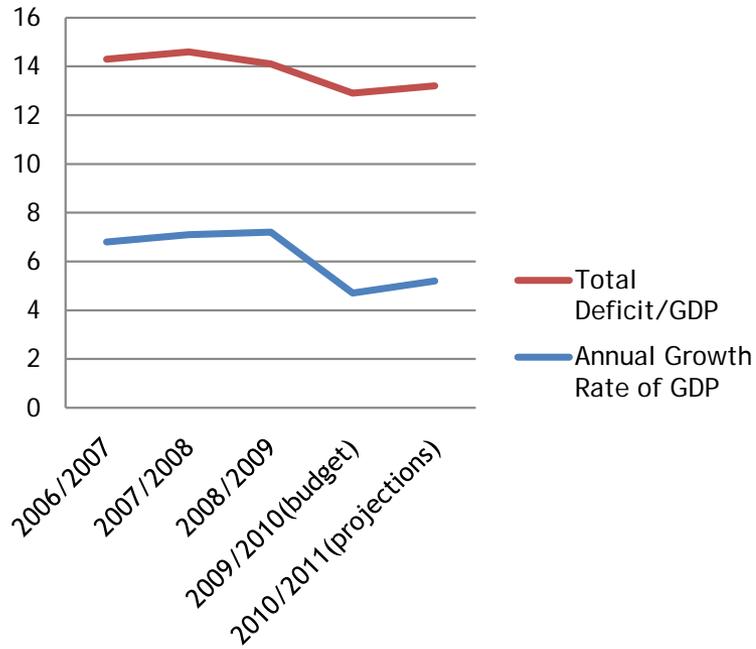
## Balance of Payments (US \$Million)

Items	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010
Trade Account	-11.986	-16.291	-23.415	-25.173	-25.120
Financial Account	3.549	892	7.555	2.287	8.362
Overall Account	3.253	5.282	5.420	-3.378	3.356

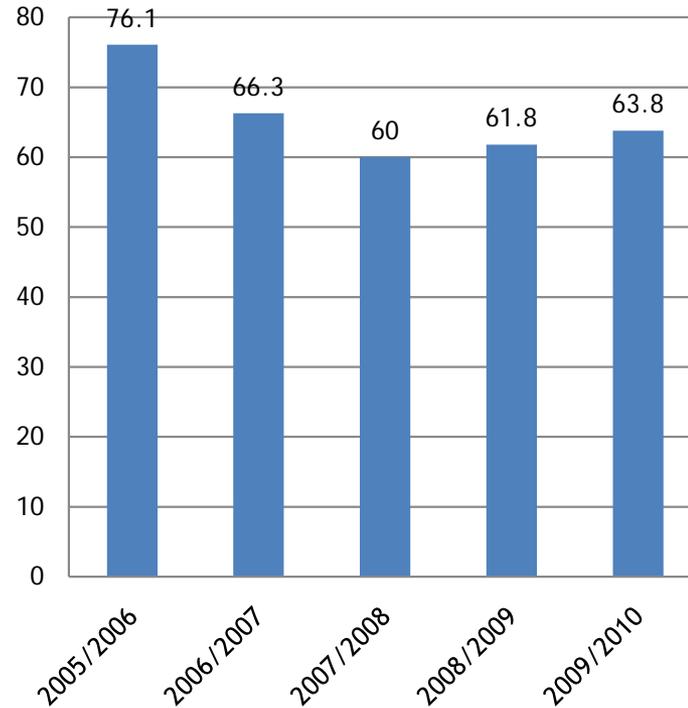
Source: Ministry of Finance, Jan, 2011

# THE EGYPTIAN ECONOMY BEFORE JANUARY 25TH 2011 (CONT'D)

## GDP Growth Rate Vs. Total Deficit/GDP



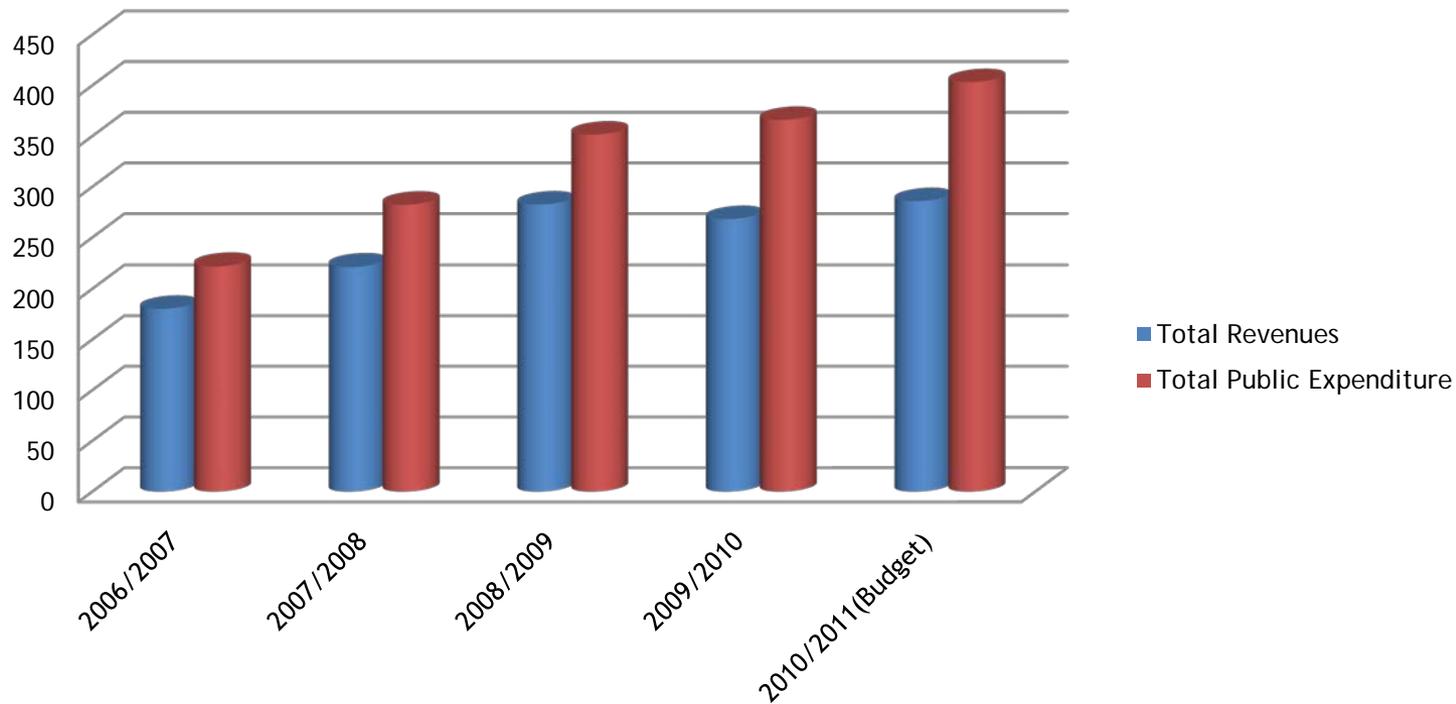
## Total Domestic Debt /GDP



Source: Ministry of Finance  
, Jan. 2011

# THE EGYPTIAN ECONOMY BEFORE JANUARY 25TH 2011 (CONT'D)

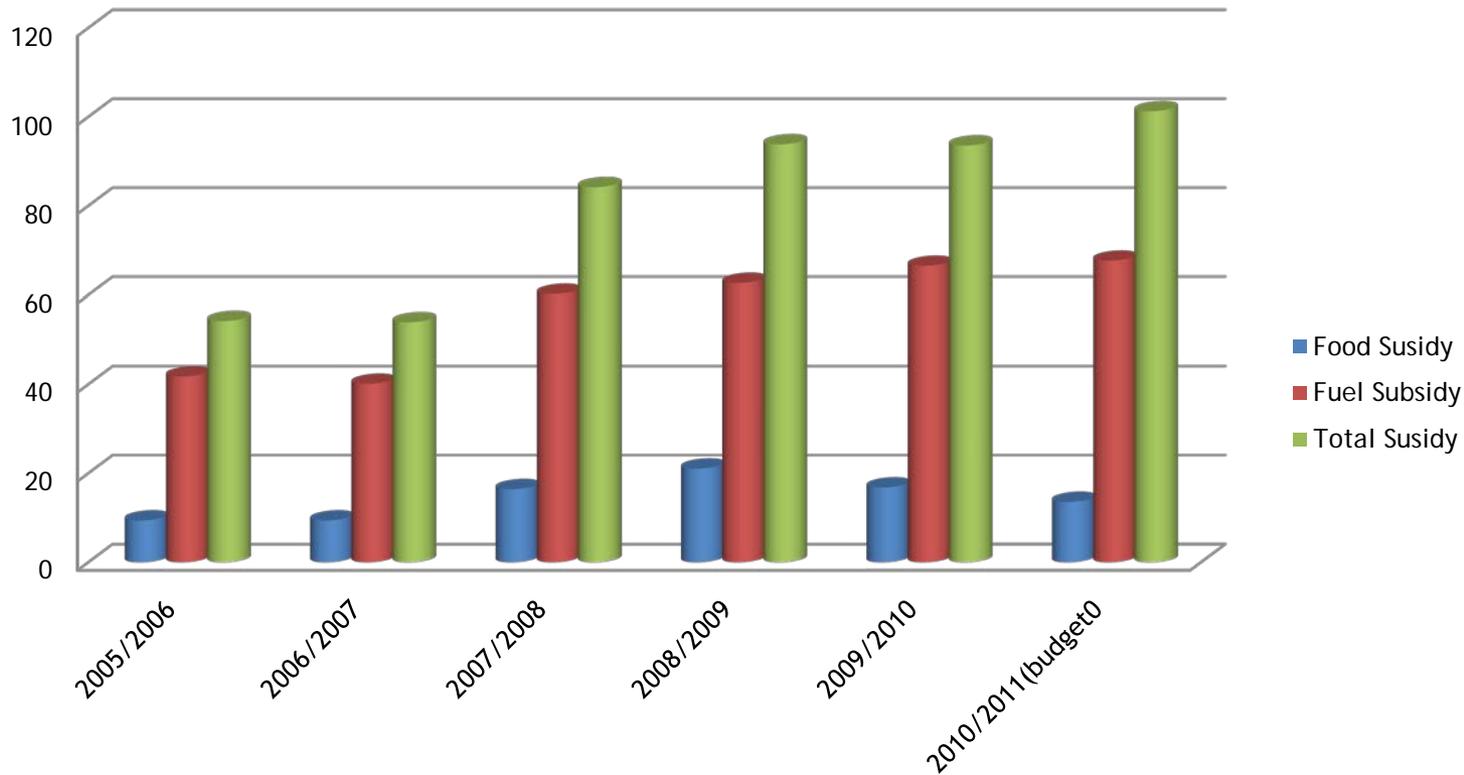
Total Revenue and Total Public Expenditure (EG  
Billion)



Source : Ministry of Finance , Jan , 2011

# THE EGYPTIAN ECONOMY BEFORE JANUARY 25TH 2011 (CONT'D)

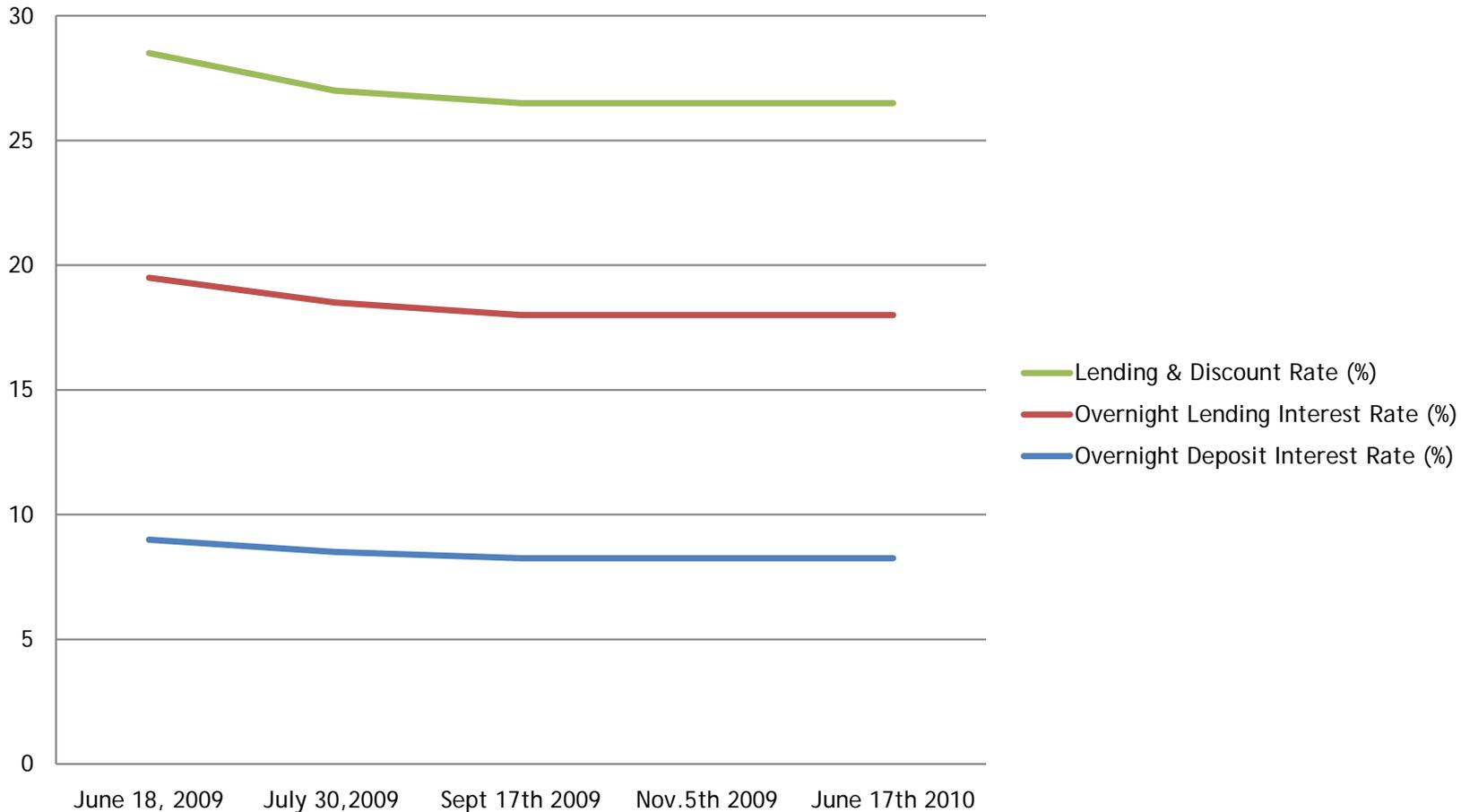
## Food&Fuel Subsidies (EG Billion)



Source: Ministry of Finance, Jan, 2011

# THE EGYPTIAN ECONOMY BEFORE JANUARY 25TH 2011 (CONT'D)

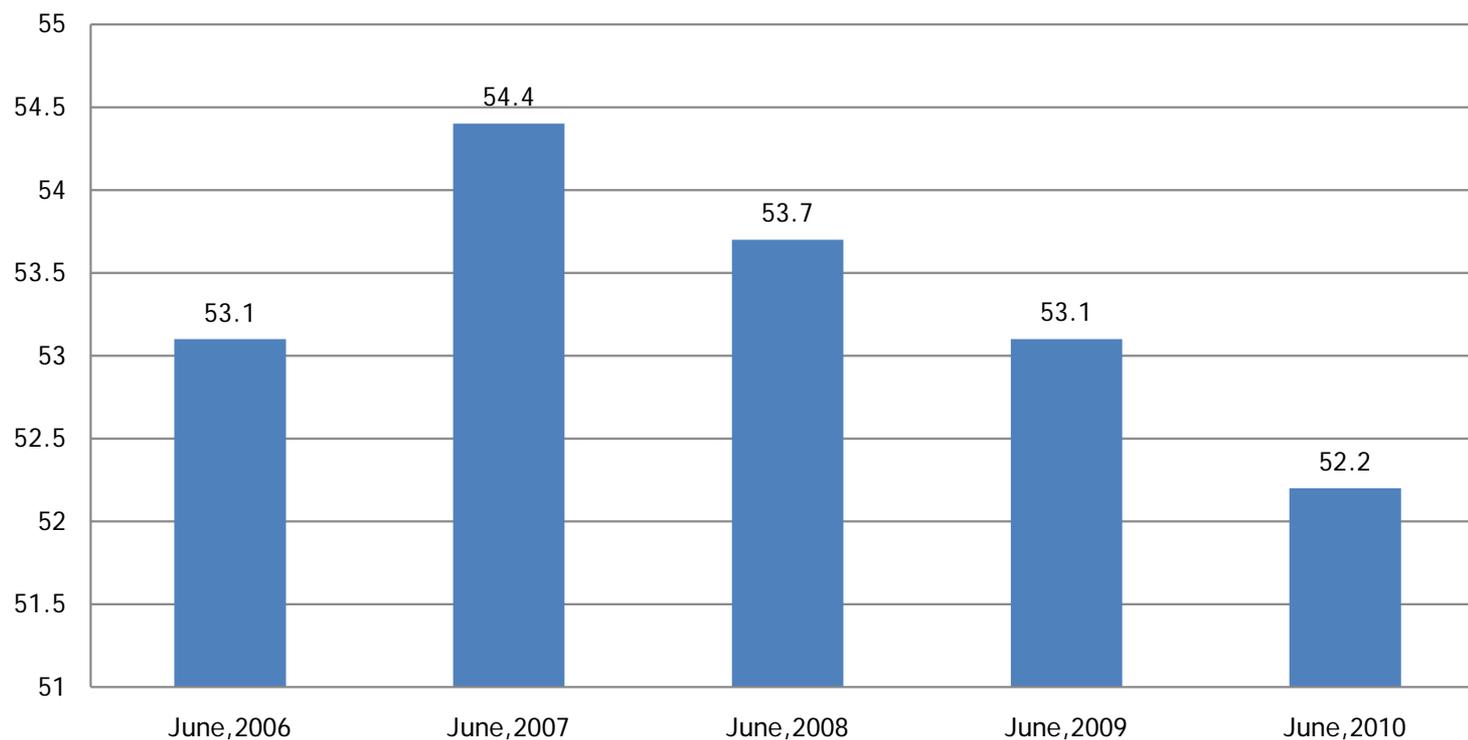
## Policy Rates



Source: The CBE, 2011

# THE EGYPTIAN ECONOMY BEFORE JANUARY 25TH 2011 (CONT'D)

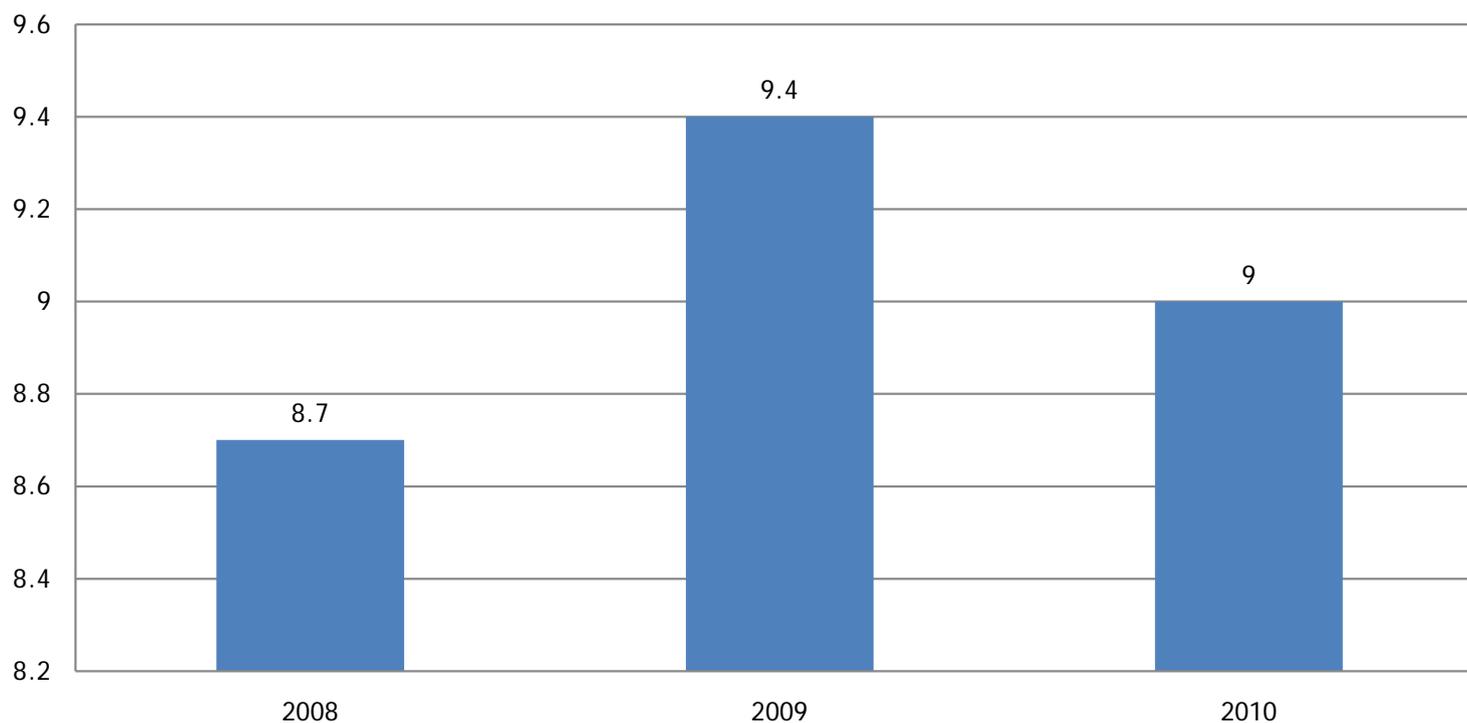
## Loans/Deposits Ratio



Source: The CBE

# THE EGYPTIAN ECONOMY BEFORE JANUARY 25TH 2011 (CONT'D)

## Unemployment Rate (Annual Average)



Source: ILO, Egypt :Country Profile

## THE EGYPTIAN ECONOMY BEFORE JANUARY 25TH 2011 (CONT'D)

Item	2000	2005
Poverty headcount ratio at \$ 2 a day(PPP)(% of population)	19.37	18.46
Income share held by highest 10%	28.34	27.62
Income share held by lowest 10%	3.88	3.85
Income share held by highest 20%	42.1	41.46
Income share held by lowest 20%	8.95	8.96
GINI Index	32.76	32.14

Source: World Development Indicators

# THE EGYPTIAN ECONOMY BEFORE JANUARY 25TH 2011 (CONT'D)

## Egypt & Corruption Perception Index

	Number of Countries including in the indicator	Ranking of Egypt	Value of the indicator
2005	159	70	3.4
2007	180	105	3.2
2010	178	98	3.7

Source: International Transparency Organization ,2010



# SOCIAL & ECONOMIC CONSEQUENCES OF THE REVOLUTION

# SOCIAL & ECONOMIC CONSEQUENCES OF THE REVOLUTION

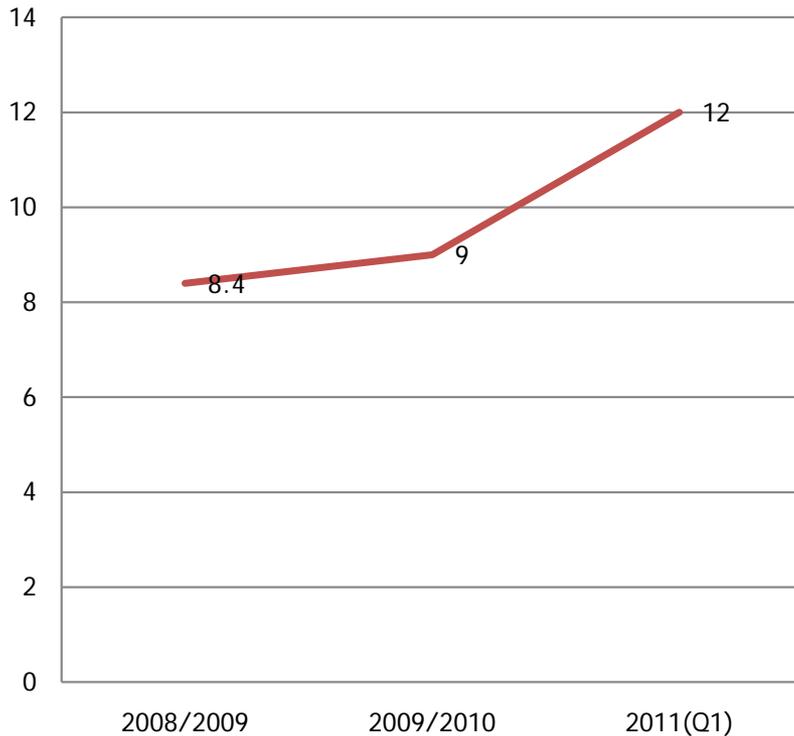
- ◉ Gains of the revolution,
- ◉ Social and Economic losses.

## SOCIAL & ECONOMIC CONSEQUENCES OF THE REVOLUTION (CONT'D): GAINS

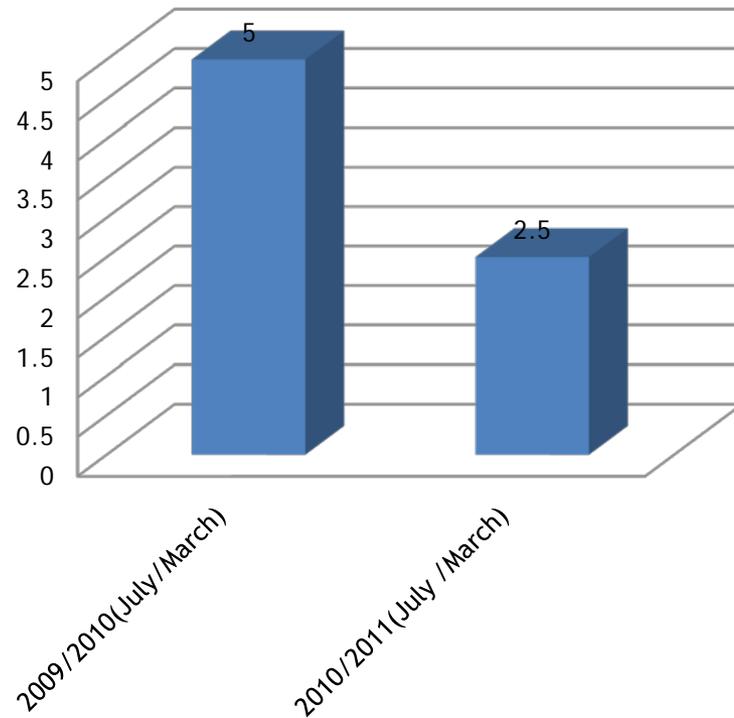
- Youth has the ability to change the society,
- Fighting corruption is not dream , we can achieve it,
- The availability of Popular will to protect the community after lack of confidence in Police
- New Steps towards Democracy.

# SOCIAL & ECONOMIC CONSEQUENCES OF THE REVOLUTION (CONT'D): LOSSES

## Unemployment Rate



## Annual Real Growth Rate of GDP at Factor Cost



Source : CBE, 2011

# SOCIAL & ECONOMIC CONSEQUENCES OF THE REVOLUTION (CONT'D): LOSSES

Estimated losses during January 28<sup>th</sup> - February 5<sup>th</sup> 2011

Item	Manufacture sector	Construction sector	IT sector
Estimated loss	EG 3.7 Billion	EG 762.3 Million	US \$ 90 Million (during service cutting )*
% idle capacity to available productive capacity	60%	90%	

Source : IDSC ,Egyptian Cabinet , 2011

\*OECD estimation

# SOCIAL & ECONOMIC CONSEQUENCES OF THE REVOLUTION (CONT'D): LOSSES

Estimated losses in Tourism during January 28<sup>th</sup> - February 5<sup>th</sup> 2011

No. of tourists who left Egypt in the last week of January	210 Thousands
Total loss in tourists' expenditure in the last week of January	US \$ 178 Million
Total loss of reserve cancellation in February	US \$ 825 Million
Total reduction in permanent wages of workers	EG 70 Billion

Source: IDSC ,Egyptian Cabinet ,2011

# SOCIAL & ECONOMIC CONSEQUENCES OF THE REVOLUTION (CONT'D): LOSSES

## □ Sources of Foreign Receipts:

The reduction in export in the last week of January reached US \$ 20 Million

Suez Canal Revenue decreased from US \$ 125 Million in the first week of January to US \$96 Million in the third week of February .

## □ Several agencies downgraded Egypt's rating :

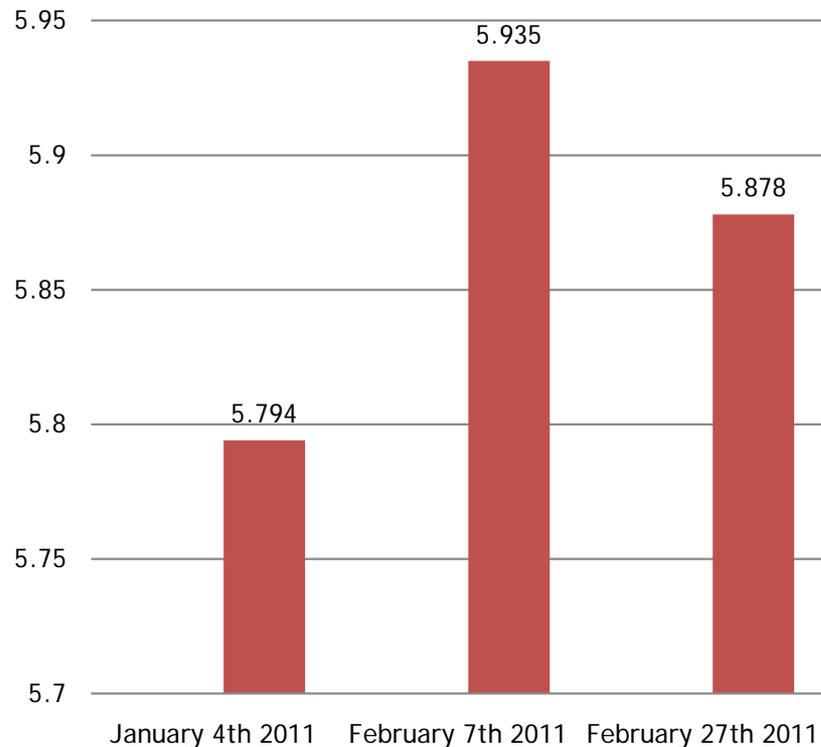
Moody's-Ba1  Ba2

S&P-BBB-/A-  BB+/B

Fitch-Stable  Negative

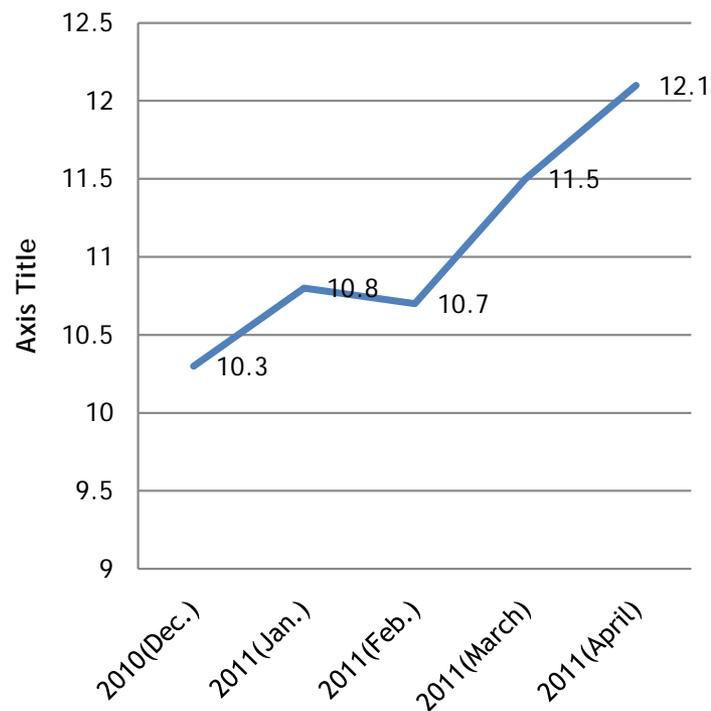
# SOCIAL & ECONOMIC CONSEQUENCES OF THE REVOLUTION (CONT'D): LOSSES

The exchange rate of EG/US  
\$



Source : IDSC ,Egyptian  
Cabinet,2011

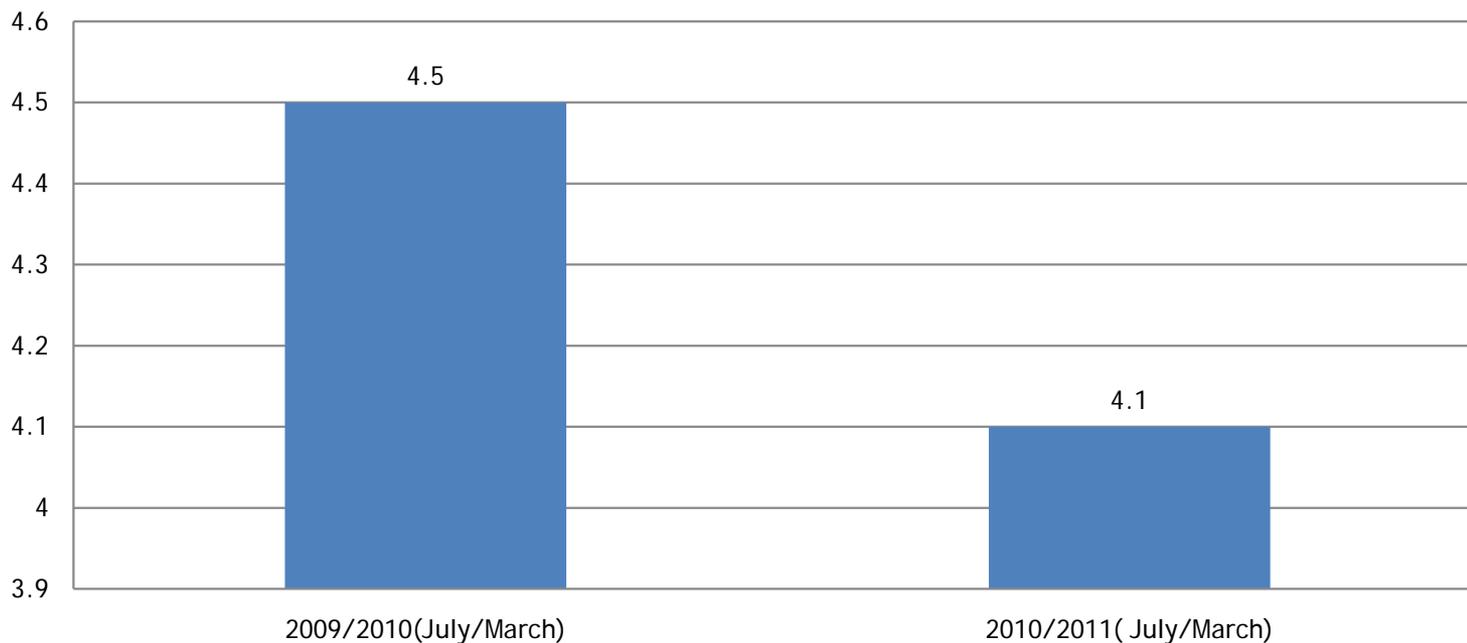
Annual Inflation Rate  
(CPI-Urban)



The CBE ,2011

# SOCIAL & ECONOMIC CONSEQUENCES OF THE REVOLUTION (CONT'D): LOSSES

## Annual Growth Rate of Private Consumption



The CBE, 2011

# SOCIAL & ECONOMIC CONSEQUENCES OF THE REVOLUTION (CONT'D): LOSSES

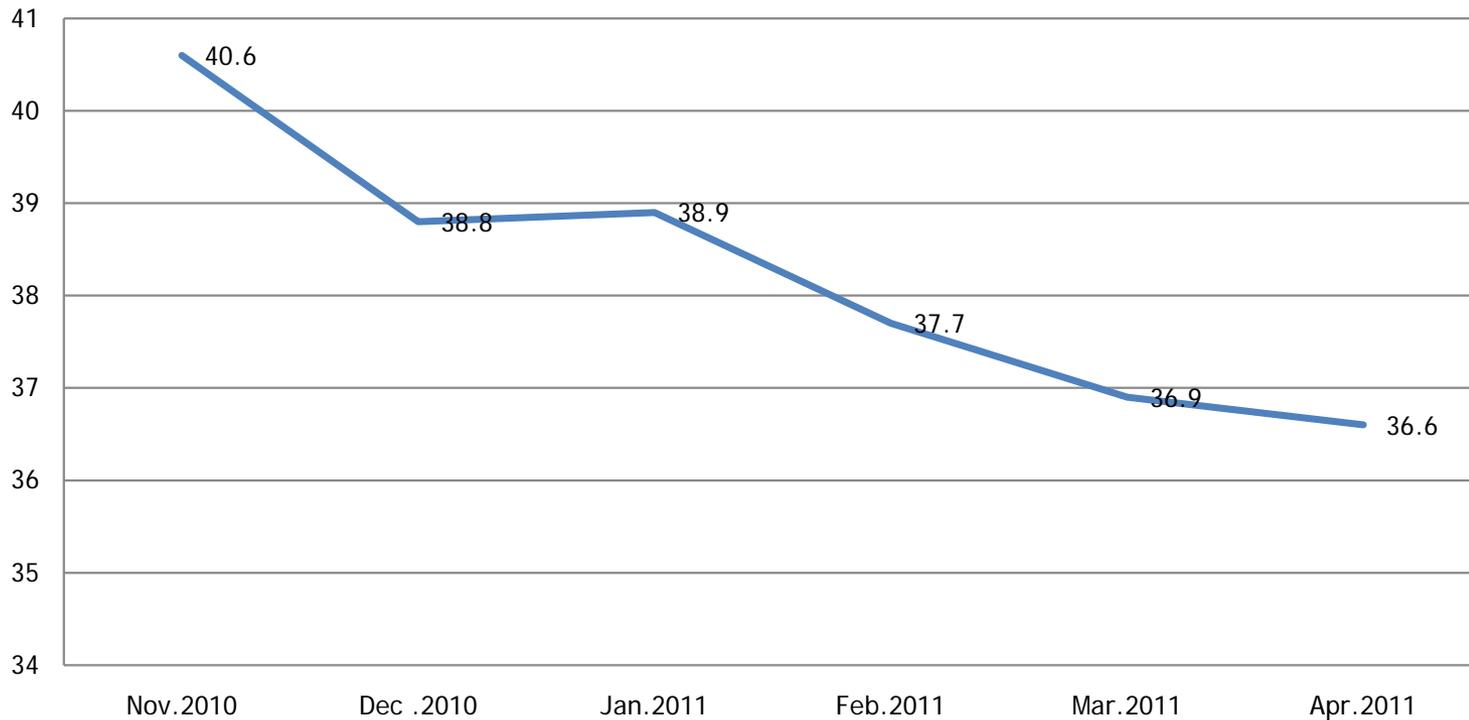
Total & private investment during 3<sup>rd</sup> Q from 2006/2007-2010\*2011 (EG Billion)

years	Total investment	Private
2006/2007	41.1	29.0
2007/2008	52.3	35.3
2008/2009	57.6	34.9
2009/2010	64.9	42.8
2010/2011	47.0	27.9

Source: Ministry of Planning & International Cooperation ,2011

# SOCIAL & ECONOMIC CONSEQUENCES OF THE REVOLUTION (CONT'D): LOSSES

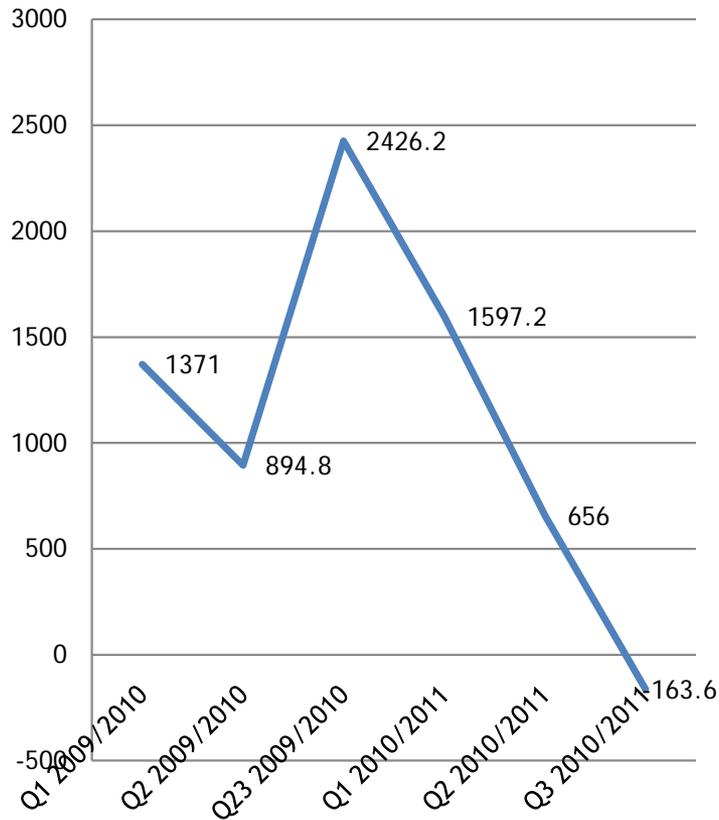
## Private Business Sector credit/Total C



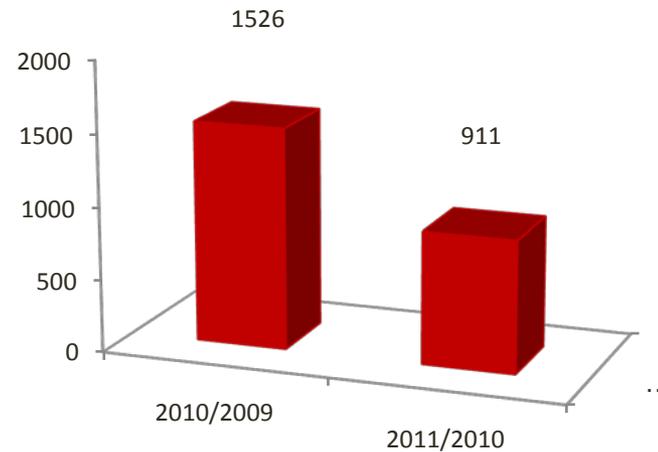
Source: The CBE, 2011

# SOCIAL & ECONOMIC CONSEQUENCES OF THE REVOLUTION (CONT'D): LOSSES

Net FDI (US\$ Million)



progress of No. of firms



Source : The CBE ,2011 and Ministry of Planning and International Cooperation,2011



# FISCAL & MONETARY RESPONSES

## FISCAL & MONETARY RESPONSES

- ◉ An expansionary fiscal policy had been adapted in 2010/2011 to eliminate the negative economic implications of the political unrest ,
- ◉ 15 % increase in wages and pensions was stipulated by the government in April 2011 ,
- ◉ A decision was taken to immediately appoint temporary government employees in their jobs.

## FISCAL & MONETARY RESPONSES (CONT'D)

Overall deficit is expected to widen significantly

(EG Million)	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011 (budget)	2010-2011 (projections)
Overall fiscal deficit	54.697	61.122	98.038	98.038	109.076	136.033
Overall deficit /GDP(%)	7.3	6.8	6.9	8.1	7.9	10

Source: Ministry of Finance ,Jan. 2011

# FISCAL & MONETARY RESPONSES (CONT'D)

- ❑ The Central Bank of Egypt (CBE) put a ceiling of EG 50.000 on daily cash withdrawals ,
- ❑ The CBE affirmed that it guarantees all the deposits in the Banking System,
- ❑ The CBE intervened in the amount US \$1.3 Billion to prevent depreciation of the exchange rate .



LOOKING FORWARD  
A HEAD :KEY  
PRIORITIES

## LOOKING FORWARD A HEAD :KEY PRIORITIES

- ❑ Application of rigorous program of security to restore confidence in police ,
- ❑ Egypt's economic outlook in 2010/2011 & 2011/2012 will depend on the speed of the reform agenda toward achieving political & social stability ,
- ❑ The economic agenda should revolve around achieving a high sustained and equitable growth rate ,
- ❑ Addressing social and economic policies to tackle high unemployment.

## LOOKING FORWARD A HEAD :KEY PRIORITIES

- ❑ Political reform will boost investors' confidence and secure sustainable and equitable growth,
- ❑ Gradual reduction in the deficit is a necessary,
- ❑ The agenda should target a reform of the tax system to mobilize additional revenues and increase efficiency in tax collection .

# LOOKING FORWARD A HEAD :KEY PRIORITIES FOR PRIVATE INVESTMENT

- ❑ Promoting private investment is a necessary,
- ❑ Supporting new investment in progress and work on the speed of their entering the operational phase,
- ❑ Formation of a permanent working group to find the challenges faced by different industries (in collaboration with the chambers of industry).

## LOOKING FORWARD A HEAD :KEY PRIORITIES FOR PRIVATE INVESTMENT

- Attracting new business by adapting the following:
  - Offering financial and nonfinancial incentives,
  - Facilitating credit to firms particularly to SMEs,
  - Government initiative to have partnership with the private sector in infrastructure projects according to PPP Law.

**THANK YOU FOR YOUR ATTENTION**

# **Macroeconomic Policies and Growth In Egypt : Policy Options**

**Nour Abdul-Razzak**

*National Opinion Research Center at University of Chicago*

**Jeffrey Condon**

*Andrew Young School of Policy Studies at Georgia State University*

**Andrew Feltenstein**

*Andrew Young School of Policy Studies at Georgia State University*

**Manal Metwaly**

*Center for Economic and Financial Research and Studies at Cairo University*

## INTRODUCTION

### **The Egyptian Economy Before the Revolution**

Following the revolution in early 2011, Egypt faces serious fiscal challenges. Prior to the revolution, Egypt was suffering along with much of the rest of the world from an economic slowdown. The political unrest caused the economy to further decline. In the months after the revolution, foreign direct investment dropped to below zero, unemployment increased from 9% to 12%, growth projections were cut in half to 2.5%, Egypt saw its bond ratings decreased by all three major ratings agencies, and tourism, Egypt's main economic industry, dried up. Business starts decreased, inflation rose, consumption fell, and investment decreased. While the gains for Egyptians may be on the horizon, the economic troubles of the next decade are daunting. The purpose of this paper is to focus on the resulting dynamic growth paths, income distributions, and budgetary consequences for Egypt as a result of possible fiscal policy reforms and aid disbursements. Simulations are conducted within a computable general equilibrium setting which includes a tax evasion component and hypothetical political constraints.

Over the past twenty years, Egypt has transformed its economy. Beginning in 1991 with the Economic Reform and Structural Adjustment Program, Egypt restored macroeconomic equilibrium by increasing the role of the private sector, relaxing price controls, reducing trade restrictions, and taming inflation and budget deficits. Egypt instituted further structural reforms in the area of monetary policy in 2000 with abolishment of the de jure exchange rate peg. It introduced a domestic currency overnight interbank market and a foreign exchange interbank market in 2001 and 2004. In 2005, the Central Bank established a 'corridor system' with a

ceiling and a floor for the overnight interest rates on both lending from and deposits at the CBE in an effort to control inflation and stabilize prices. Their goals were not met. According to the CBE, inflation at the beginning of the decade was under 3%, but by 2009 it had reached 16%.

Modest tax reform took place in 2001 with the general sales tax extended to the wholesale and retail sectors. Major reforms were enacted in 2005. The top personal income tax rate was decreased from 32% to 20%. Taxes on corporate profit were cut from 40% to 20% on profits under 10 million EGP. Property tax rates were cut from 46% to 10%. Sales taxes were standardized and cut from 46% to 30% for luxury goods, 3% to 0% for some essential goods, and a uniform rate of 10% for all nonluxury, nonessential goods. Further restructuring included the consolidation of the numerous tax collection agencies into a single agency and the implementation of self assessment of tax liability.

Following the major fiscal and monetary reforms in 2005, Egypt's economy tracked in a generally positive direction. Growth rates reached as high as 7.2% before the financial crisis caused a low of 4.7%. Unemployment fell from a 2005 rate of 11.5% to 9.2%. Domestic Debt to GDP fell to 74% from 112%. Inflation, however, rose from 4.2% to 16.2% (what is the source of all of these data). This inflation is often cited as a contributing factor of the revolution as rising food prices hit the poor hardest in addition to insufficient social policy to help the poor .

### **The Egyptian Economy After the Revolution**

In January of 2011, the Egyptian revolution ousted Mubarak from the Presidency of Egypt, the office he held for nearly 30 years. According to the protestors themselves, this revolution was largely a political revolution against police and government corruption and for democracy. We believe that it is a reasonable assumption that the new leadership in Egypt will

not drastically alter the structure of the economy by nationalizing private companies or pursuing socialist or isolationist policies. For the purpose of our model, we will assume that the largely free market economic system in Egypt as it existed prior to the revolution will continue to exist after.

Some data from the period during and after the revolution is sparse and perhaps unreliable. We do know that during the revolution, crime rates rose causing tourism to fall dramatically. IDSC estimates of losses from the decrease in tourism range in the hundreds of millions of dollars per week. According to the CBE, unemployment rose 3% in the quarter following the revolution, idle capacity numbers increased sharply, and quarterly foreign direct investment fell from an inflow of nearly \$2.5 billion the year before to an outflow of \$163million. Regarding fiscal policy, immediately following the revolution, the Minister of Finance stipulated a 15% increase in wages and pensions for the government sector and there was a proposal that the top marginal income tax rate would increase to 25%. Also, in the months following the revolution, billions of dollars were pledged by foreign governments to the Egyptian people in the form of foreign aid. It remains to be seen if this money is sent and in what quantities.

Our model is calibrated to the period prior to the revolution from 2001 to 2008. In the forward looking simulations we conduct, we include all post revolution reforms as well as some the resulting changes in investment and expenditure. We approach our simulations considering the economic environment and policy prescriptions as they exist in early 2012. We conduct three simulations altering foreign borrowing, foreign direct investment, and income transfers.

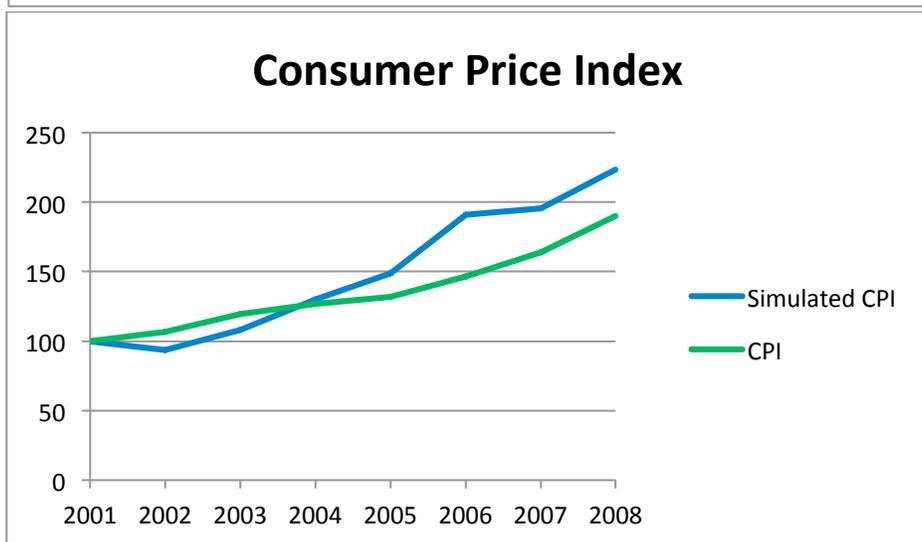
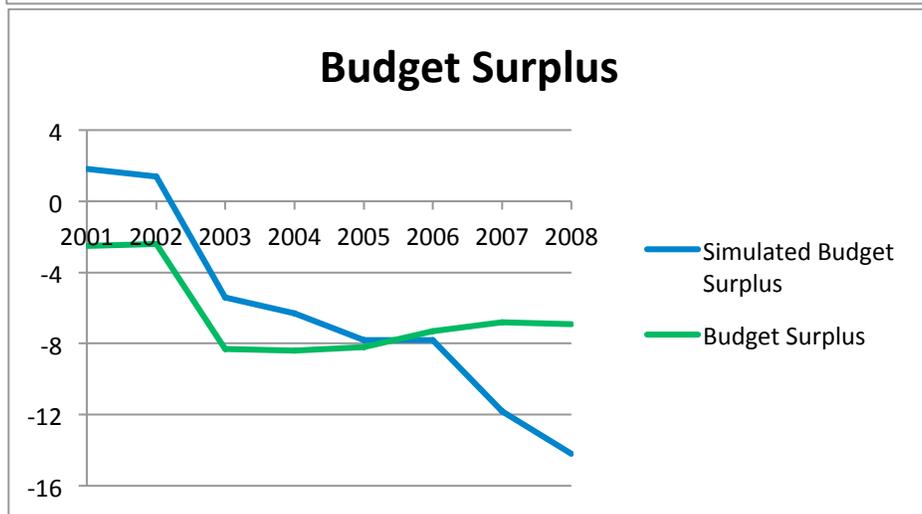
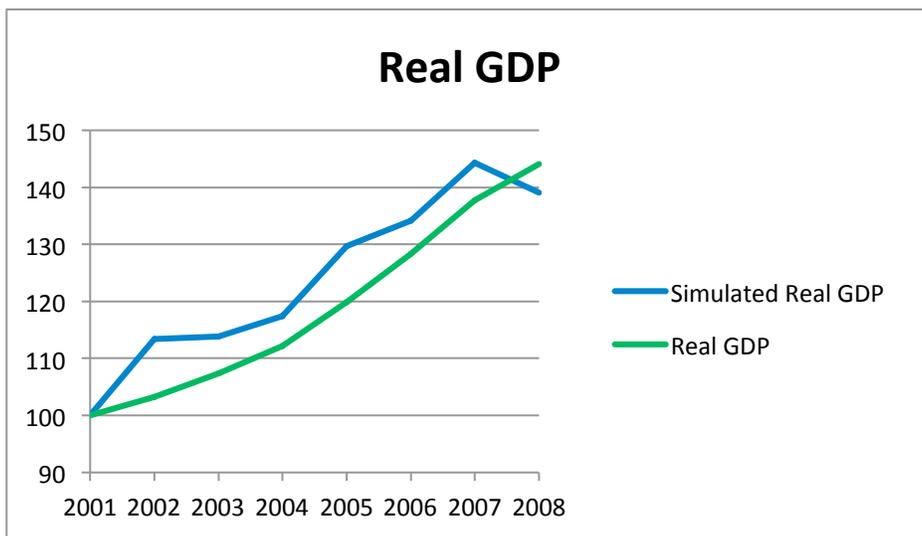
## CALIBRATION

### Benchmark Simulation

In order to use our model for counterfactual simulations, we first generate an equilibrium using benchmark policy parameters. We run the macroeconomic model forward for eight years, giving tax rates and public expenditures their estimated values. In particular, we assume an effective corporate tax rate of 20 percent, except for oil extraction which has a 40 percent rate. We also suppose that the central bank maintains a fixed exchange rate in each period, with the rate being fixed at the actual historical level of the corresponding year. In practice, we take 2001 as the base year, so initial allocations of factors are those at the end of 2000.

Table 1 in Appendix I shows the results of the benchmark simulation. It may be worth making a few remarks concerning the simulated versus historical values. We notice that simulated real GDP tracks historical Egyptian GDP fairly well until the final period, when the simulation generates a decline in real GDP. This is due to the gradual over-valuation of the exchange rate in the simulation. Nonetheless, the average real growth rate is close to the Egyptian average real rate for 2001-2008. The simulated price level moves in line with Egyptian price levels, although the simulated interest rate is considerably higher than the market rate. This is largely the result of the simulated budget deficit being higher than the actual deficit in the final 2 years of the simulation, although it tracks the actual budget deficit quite accurately for the first 6 years of the simulation. The simulated trade balance is much better than the historical series, largely because we simulate a too high demand for Egyptian exports. Finally, we notice that sectors 4 and 5, services and retail trade, and administration, health, and education, are operating partially in the underground economy, and sector 4 is a particularly serious tax evader.

### Benchmark Simulation Graphs



SIMULATIONS

**Simulation 1 : FDI = 0, Foreign Borrowing = 0, Beginning in 2011**

We now consider Egypt in 2011 after the change in regime. In order to carry out a new, forward looking set of simulations, we assume that all initial capital and labor stocks for 2011 are those generated for the final year of the base case simulation<sup>1</sup>. We then suppose that the new economic situation is characterized by a halt in all FDI into Egypt, as well as a freeze in all public foreign borrowing. Hence there is no foreign financing of the budget deficit. We carry the simulation forward from 2011 – 2018. Complete results are given in Table 2 of Appendix I. As we see, the real growth rate falls to barely 1 per cent, on average. The budget deficit rises, as the absence of foreign financing causes the domestic interest rate to rise, as all financing must come from domestic savings. Finally, the degree of tax evasion in sectors 4 and 5 remains approximately the same as in our calibration baseline.

**Simulation 2 : Initial FDI Inflow into each Sector Equal to 33% of Initial Sectoral Capital**

Let us now suppose that there is a recovery in FDI. In particular, we will suppose that there is an initial inflow of FDI in 2011 so that FDI in each of the 5 sectors of the economy is equal to 33 percent of the existing capital stock at the beginning of 2011. The outcomes are given in Table 3 in Appendix I. As might be expected, there is an initial large increase in GDP, as compared with Simulation 1, after which GDP remains relatively flat, as there are no further FDI inflows. Interestingly, tax evasion in sectors 4, 5 becomes much worse as the influx in new capital has lowered the returns to domestic capital in those sectors. Accordingly, the value of investment has declined in those sectors, leading to the observed increase in tax evasion. Finally,

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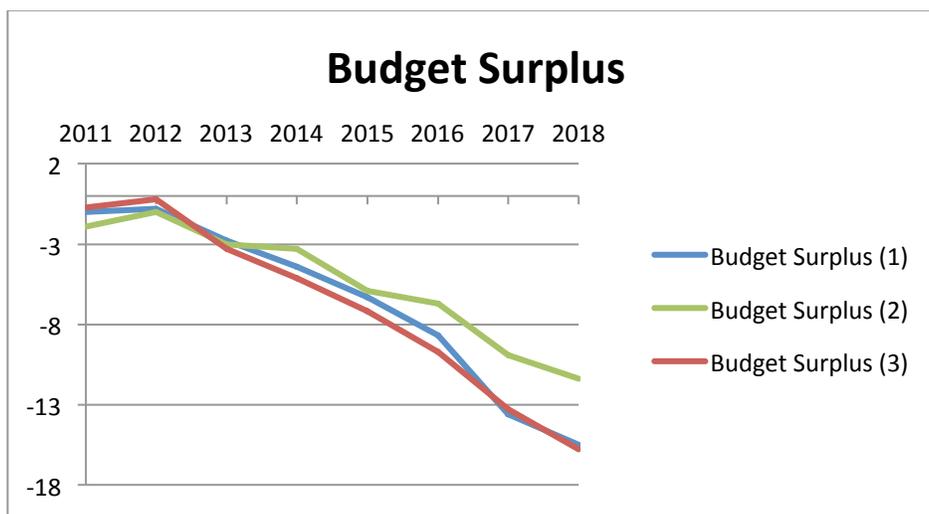
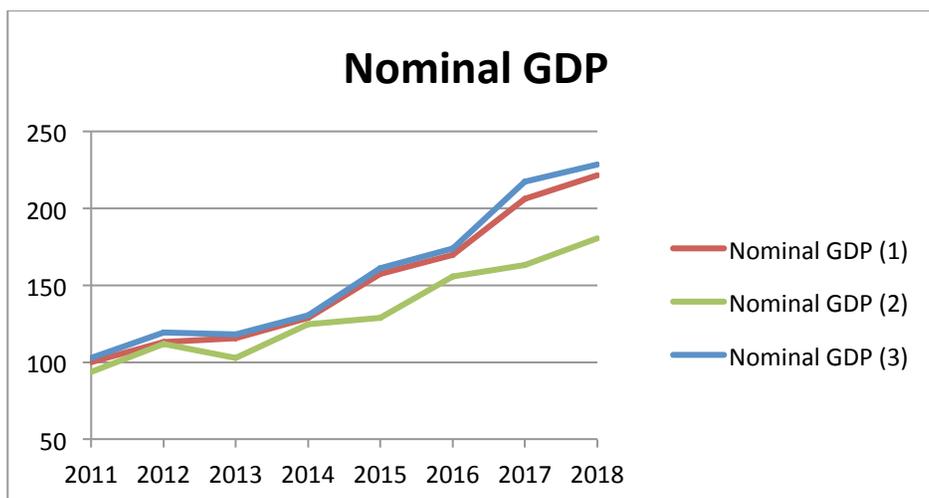
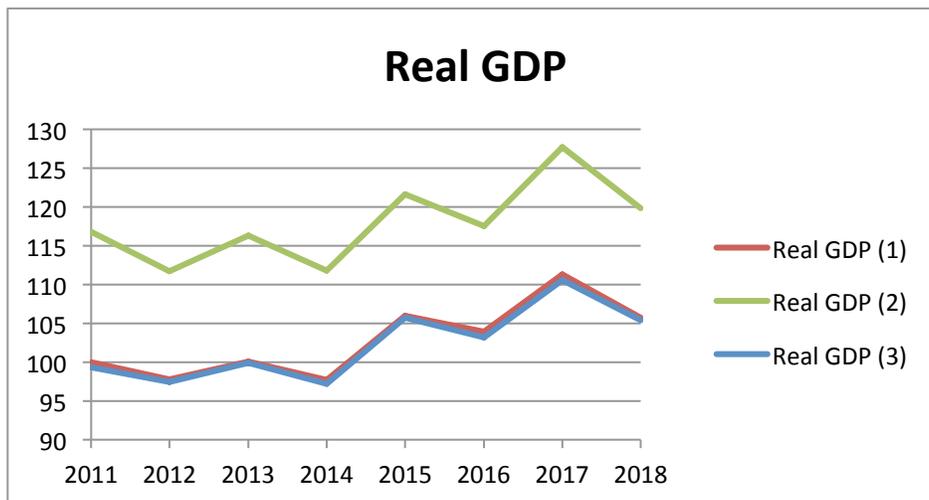
<sup>1</sup> Clearly we should carry forward the base case simulation to 2010, but comparison data was not available at this time.

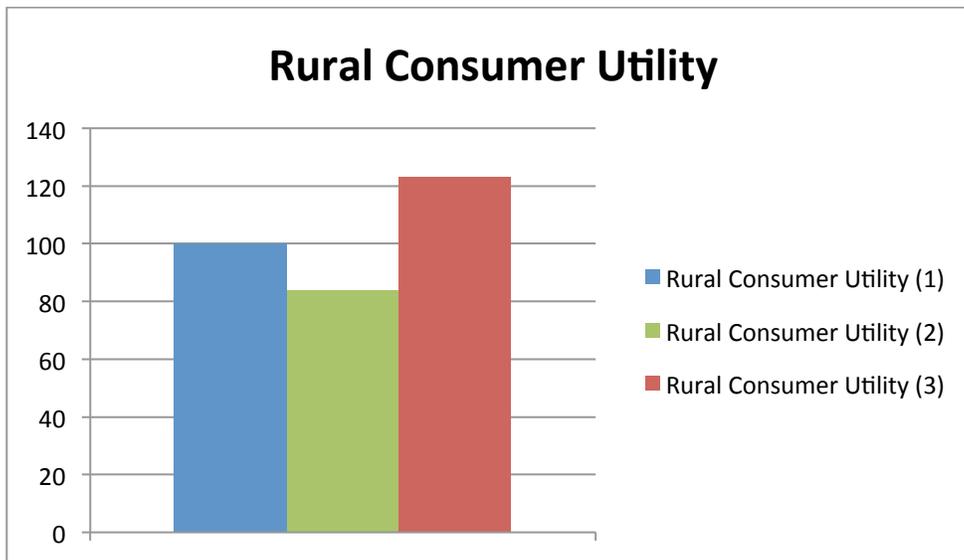
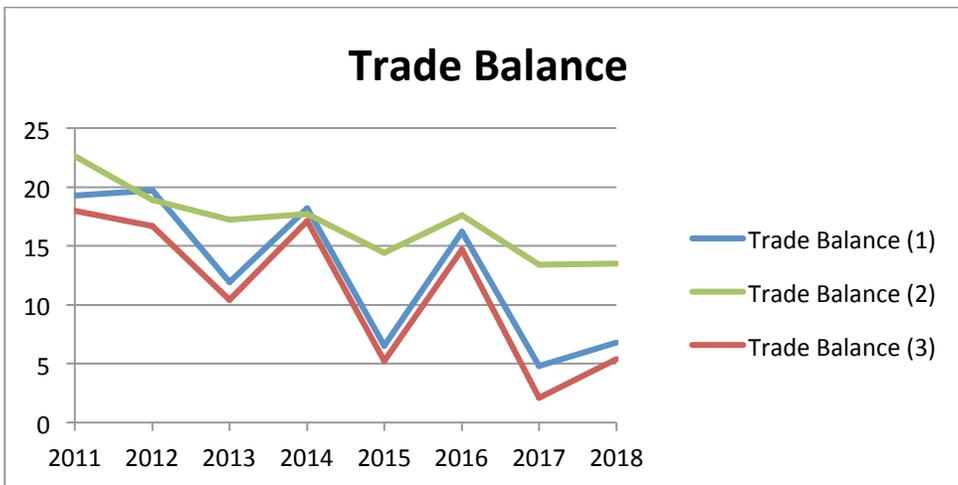
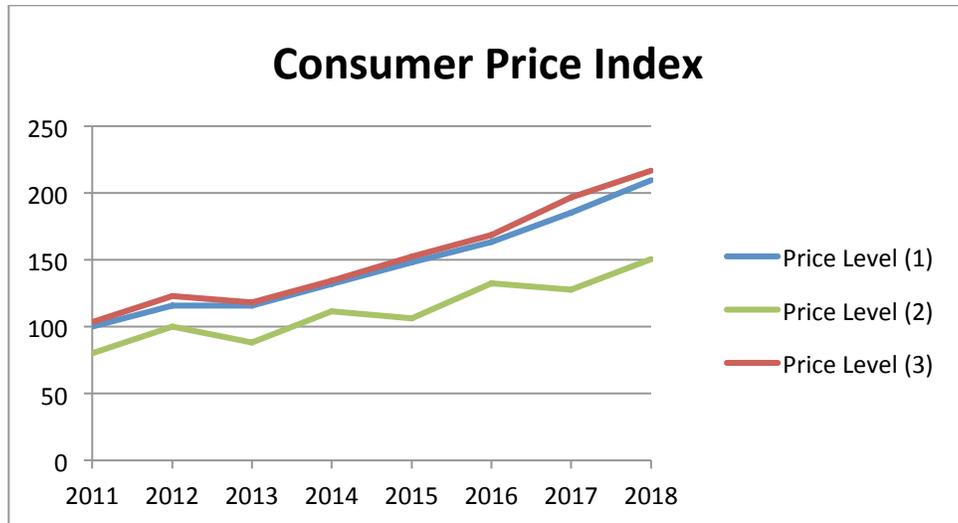
the utility of the rural consumer has declined, as capital is utilized in urban sector which has benefited from the FDI.

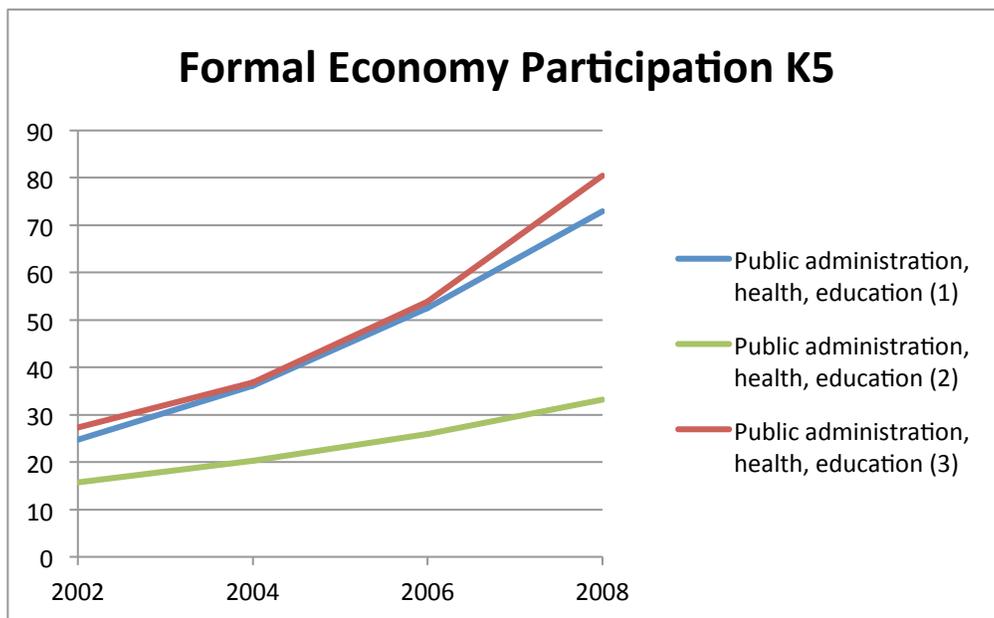
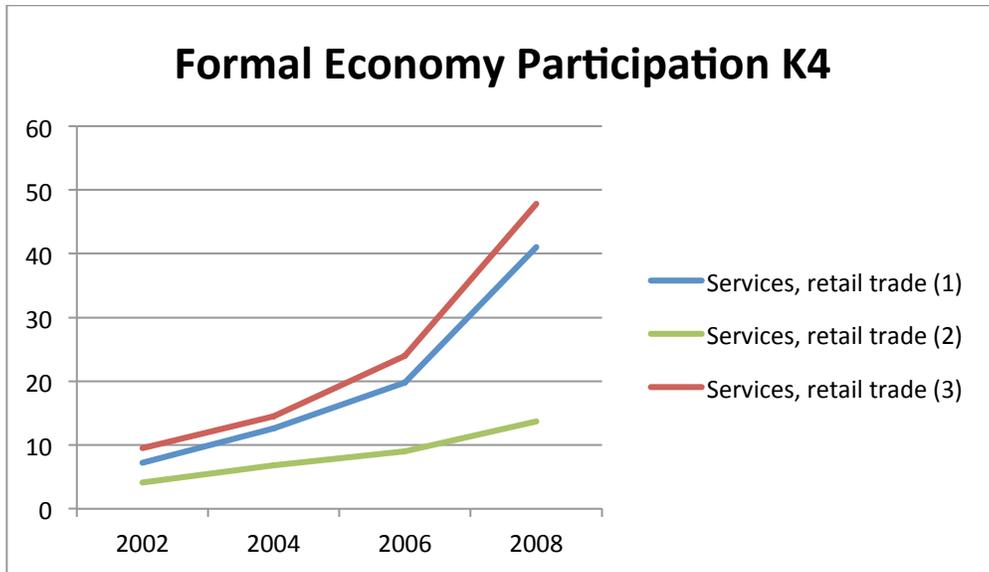
### **Simulation 3: FDI Value is Given as Cash Transfer to Rural Consumers**

As a final simulation, let us suppose that instead of the FDI of the previous example being used for new capital formation, an equivalent amount of domestic currency were given as an income transfer to the rural sector. Thus there would be a one-time transfer payment to the rural consumer of domestic currency equal to the domestic currency value of the FDI of Simulation 2. The results are given in Table 4 in Appendix I. As might be expected, there is a drop in GDP, as compared to Simulation 2. We also see that the rural consumer is considerably better off (higher intertemporal utility). The budget deficit rises sharply, as the tax base has declined compared with Simulation 2. At the same time it is interesting to note that tax compliance has improved. This is because the return to domestic capital is higher now, given the absence of the foreign capital inflows. Thus domestic investment is more attractive than before, leading to less tax evasion.

## Simulation Graphs







## CONCLUSIONS

Our baseline scenario where foreign direct investment and foreign borrowing are removed shows how important these two factors are on economic growth. In this simulation we see an economy where real GDP is essentially unchanged over eight years while prices have doubled. Our second and third simulations with a sudden influxes of FDI could nearly approximate a large influx of foreign aid or be a result of some fundamental change in the economic environment. In the first simulation we model a scenario where the entire amount is efficiently invested across the five capital sectors in what could be described as an investment plan. This results in the expected increase in GDP. However, the lack of ongoing FDI leads to growth rates similar to our baseline. Also, the resulting lower return to capital causes domestic capital owners to leave the formal economy to avoid taxes. In the final simulation, we see the identical influx distributed efficiently among the rural consumer so as to simulate a redistributive policy. The increase in GDP is less than in simulation 2, but the rural poor are moved to a predictably higher utility curve. Other macroeconomic variables are considerably worse in this model including budget deficits and inflation. Tax compliance is however improved.

Our three simulations show how computable general equilibrium can be used to help understand how different policy actions may impact the future economic climate. These simulations give us an idea of what tradeoffs we face in policy debates. While they cannot predict precise growth rates or inflation rates a decade out, they can help us differentiate between choices that must be made today.



## GENERAL EQUILIBRIUM SPECIFICATION

In this section, we develop the formal structure of a dynamic general equilibrium model which includes production, banking, consumption, government, and foreign sector. This model is designed to endogenously generate tax avoidance behavior through the interaction of production, banking, consumption, and government. The structure of our model is designed to permit the numerical calculation of gaps in tax collection. The model has  $n$  discrete time periods. All agents optimize in each period over a 2 period time horizon. That is, in period  $t$  they optimize given prices for periods  $t$  and  $t + 1$  with expectations for prices for the future after period  $t + 1$ . When period  $t + 2$  arrives, agents re-optimize for period  $t + 2$  and  $t + 3$ , based on new information about period  $t + 2$ . Agents have perfect foresight for the next 2 periods, and adaptively generate expectations for the future thereafter.

## Production

There are eight factors of production and three types of financial assets.

These are:

- |     |               |     |                   |
|-----|---------------|-----|-------------------|
| 1-5 | Capital types | 9.  | Domestic currency |
| 6.  | Urban labor   | 10. | Bank deposits     |
| 7.  | Rural labor   | 11. | Foreign currency  |
| 8.  | Land          |     |                   |

The five types of capital correspond to five aggregate nonagricultural productive sectors.

These are:

1. Food processing
2. Oil
3. Textiles, other industrial products, electricity
4. Construction
5. Services, including government services

An input-output matrix,  $A_t$ , is used to determine intermediate and final production in period  $t$ . We use a 15x15 Egyptian input-output matrix that is described in the next section. Corresponding to each sector in the input-output matrix, sector-specific value added is produced using capital and urban labor for the nonagricultural sectors, and land and rural labor in agriculture. Hence  $A_t$  may have any dimension, but capital is specific to sectors aggregated in the above way. Accordingly, capital is perfectly mobile across a given subsector, but is immobile across other subsectors. Labor, on the other hand, may migrate from the rural to the urban sector.<sup>2</sup> This rural-urban migration is an important feature of the Egyptian economy.

The specific formulation of the firm's problem is as follows. Let  $y_{Ki}^j, y_{Li}^j$  be the inputs of

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<sup>2</sup> We assume that the labor market is not segmented and there is no wage differential between workers in the underground and the formal economy.

capital and urban labor to the  $j$ th nonagricultural sector in period  $i$ . Let  $Y_{Gi}$  be the outstanding stock of government infrastructure in period  $i$ . The production of value added in sector  $j$  in period  $i$  is then given by:

$$va_{ji} = va_{ji}(y_{Ki}^j, y_{Li}^j, Y_{Gi}) \quad (1)$$

where we suppose that public infrastructure may act as a productivity increment to private production.

Sector  $j$  pays income taxes on inputs of capital and labor, given by  $t_{Kij}$ ,  $t_{Lij}$  respectively, in period  $i$ . The interpretation of these taxes is that the capital tax is a tax on firm profits, while the labor tax is a personal income tax that is withheld at source.

We suppose that each type of sectoral capital is produced via a sector-specific investment technology that uses inputs of capital and labor to produce new capital. Investment is carried out by the private sector and is entirely financed by domestic borrowing.

Let us define the following notation:

$C_{Hi}$  = The cost of producing the quantity  $H$  of capital of a particular type in period  $i$ .

$r_i$  = The interest rate in period  $i$ .

$P_{Ki}$  = The return to capital in period  $i$ .

$P_{Mi}$  = The price of money in period  $i$ .

$\delta_i$  = The rate of depreciation of capital.

Suppose, then, that the rental price of capital in period 1 is  $P_1$ . If  $C_{H1}$  is the cost-minimizing cost of producing the quantity of capital,  $H_1$ , then the cost of borrowing must equal the present value of the return on new capital. Hence:

$$C_{H1} = \sum_{i=2}^n \left[ \frac{P_{Ki}(1-\delta)^{i-2} H_1}{\prod_{j=1}^{i-1} (1+r_j)} \right] \quad (2)$$

where  $r_j$  is the interest rate in period  $j$ , given by:

$$r_j = \frac{1}{P_{Bj}}$$

Where  $p$  is the price of a bond in period  $j$ . The tax on capital is implicitly included in the investment problem, as capital taxes are paid on capital as an input to production.

The decision to invest depends not only on the variables in the above equation, but also upon the decision the firm makes as to whether it should pay taxes. This decision determines the firm's entry into the underground economy. We assume that the firm's decision is based upon a comparison of the tax rate on capital with the rate of return on new capital. If the tax rate on capital is less than the corresponding rate of return, the firm pays the full tax. If the tax rate is greater than the return to new capital, then the firm pays less than the full capital tax. That is, it withdraws, at least partially, into the underground economy. Formally, suppose that we were in a two period world. Suppose that:

$$\frac{P_{K2}}{1+r_1} \geq t_{K1}$$

that is, the present value of the return on one unit of new capital is greater than the current tax rate on capital. In this case we assume the investor pays the full tax rate on capital inputs.

Suppose, on the other hand, that:

$$\frac{P_{K2}}{1+r_1} \leq t_{K1}$$

Here the discounted rate of return is less than the tax rate, and the firm will attempt to reduce its

tax payments by moving into the underground economy. The extent to which the firm goes into the underground economy is determined by the gap between the tax rate and the rate of return to investment. That is, the firm pays a tax rate of  $\bar{t}_{K1}$  where:

$$\bar{t}_{K1} = t_{K1} \left[ 1 - \left( \frac{t_{K1} - \frac{P_{K2}}{1+r_2}}{t_{K1}} \right) \right]^\alpha \quad (3)$$

Here  $0 \leq \alpha$  and higher values of  $\alpha$  lead to lower values of taxes actually paid. That is, the ratio

$\frac{\bar{t}_{K1}}{t_{K1}}$  reflects the share of the sector that operates in the above ground economy. Hence  $\alpha$

represents a firm-specific behavioral variable. An “honest” firm would set  $\alpha = 0$ , while a firm that is prone to evasion would have a high value for  $\alpha$ . We should note that the firm does not actually pay a “rate” lower than the statutory rate. Rather, it under-reports its income so that the effective tax rate paid is  $\bar{t}_{K1}$ . If a sector can avoid paying taxes, as above, by going into the underground economy, why does it pay taxes at all? That is, why does it simply not set  $\bar{t}_{K1} = 0$ ?

In the next section we develop a simple approach that supposes that a firm’s refusal to pay taxes reduces its ability to borrow from the commercial banking system. Thus a firm’s desire to invest will constrain its evasion of tax payments.

Suppose that the firm carries out this strategy of reducing tax payments based on its honesty coefficient  $\alpha$ . We suppose that the firm's goal is to maximize the real value of its final period, T, capital stock. Accordingly, the firm wishes to maximize  $V_{jT}$  where:

$$V_{jT} = \frac{P_{KjT} \left[ (1 - \delta)^T H_0 + \sum_{i=2}^T (1 - \delta)^{(T-i)} H_i \right]}{CPI_T}$$

and  $CPI_T$  is the consumer price index in period T.

## **Banking**

The banking sector in our model is quite simple and is meant to capture some of the key features and problems in Egypt as well as many other developing countries. We will suppose that there is one bank for each nonagricultural sector of the economy. There are 5 such sectors, and hence 5 banks, corresponding to each of the sectors in the aggregate national income accounts. Such sectoral specialization of the banking system reflects the reality of many developing countries.

Each bank lends primarily to the sector with which it is associated. The banks are, however, not fully specialized in the sector they correspond to. We make the simplifying assumption that each bank holds a fixed share of the outstanding debt of its particular sector. It then holds additional fixed shares of the debt of each of the remaining sectors. We make this assumption of diversification of assets in order to allow for a situation in which a firm that evades taxes, and thereby enters the underground economy, might receive varying degrees of credit rationing from the different banks to which it applies for loans.

We choose a simple approach to determine the degree of credit rationing that firms face. Our premise is that banks have no direct way of knowing whether specific firms operate in the underground economy. We assume that banks only care about the amount of capital that they estimate the firm may have. If the firm defaults on its loan, then this represents the best estimate of the amount that the bank could seize. The bank would, presumably, be willing to lend an amount equal to at least the estimated firm capital. If the firm requests a loan larger than its estimated capital, the bank may choose to grant the full loan, or it may choose to restrict the loan amount. This restriction would depend, in turn, upon the bank's degree of risk aversion.

How can the bank estimate the value of the firm's capital, if this information is not directly revealed by the firm? We assume the borrower is required to show the bank his tax returns in order to obtain a loan. There is a single, flat corporate tax rate that the borrowing firm faces. Hence, suppose that  $T_{K1}$  represents taxes actually paid by the borrower in period 1. This is known to the bank, as the potential borrower is required to present his tax returns. Thus if the borrower fully complied with his tax obligation, and hence carried out no underground activity, the value of his capital,  $\hat{K}_1$ , would be given by:

$$\hat{K}_1 = \frac{T_{K1}}{t_{K1}}$$

Accordingly, the bank would be willing to lend at least  $\hat{K}_1$  to the borrower, as this would represent a minimum estimate of the value of the firm's capital, which could be seized in the event of a default.<sup>3</sup> Suppose, however, that the amount the firm wishes to borrow,  $C_{H1}$ , as in equation (2), such that:

$$C_{H1} > \hat{K}_1$$

In this case the bank lends an amount  $L_1$ , where  $L_1 < C_{H1}$ , as the bank would not be able to seize the full value of the loan in the case of a default. The situation we have described would, in the case of perfect certainty, have credit rationing when the estimated value of the firm's capital is less than its loan request. If the firm's capital is greater than its loan request, there would be no credit rationing.

In a more realistic case of uncertainty about both the true value of the firm, as well as

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<sup>3</sup> We have not explicitly incorporated bankruptcies and defaults in this model, for the sake of simplicity. However, bankruptcies and corresponding bank contractions can be introduced as in Ball and Feltenstein (2001) and Blejer, Feldman, and Feltenstein (2002).

about the bank's own ability to seize the firm, one might expect the lending process to be somewhat different. Accordingly, we will suppose that a simple functional form determines bank lending as a function of the amount requested as well as the estimated value of the firm's capital.

We define the amount the bank lends,  $L_1$ , as:

$$L_1 = C_{H1} \left[ \frac{\frac{\hat{K}_1}{C_{H1}}}{\left(1 + \frac{\hat{K}_1}{C_{H1}}\right)} \right]^\gamma = C_{H1} \left[ \frac{\hat{K}_1}{C_{H1} + \hat{K}_1} \right] \quad (4)$$

Here  $\gamma$  represents a measure of risk aversion by the bank. If  $\gamma = 0$ , there are no credit restrictions, and the bank ignores estimates of the borrower's estimated net worth. As  $\gamma$  rises, the bank increasingly restricts lending if the term in brackets is less than 1. If the firm pays no taxes, hence operating entirely in the underground economy,  $\hat{K}_1 = 0$  and hence  $L_1 = 0$ , that is there is, no lending. If  $\frac{\hat{K}_1}{C_{H1}}$  increases, as would be the case if the value of the firm increases relative to its borrowing request, then  $L_1 \Rightarrow C_{H1}$ , that is, the bank lends the full value of the request.

Thus if a firm operates entirely in the underground economy it will not be able to borrow to finance investment. If banks are highly risk averse, they will never lend more than a firm's estimated net worth, which is based on its tax return. This tax return therefore represents all the information the bank needs in order to determine its response to a request for a loan.

## Consumption

There are two types of consumers, representing rural and urban labor.<sup>4</sup> We suppose that the two consumer classes have differing Cobb-Douglas demands. The consumers also differ in their initial allocations of factors and financial assets.

The consumers maximize intertemporal utility functions, which have as arguments the levels of consumption and leisure in each of the two periods. We permit rural-urban migration which depends upon the relative rural and urban wage rate. The consumers maximize these utility functions subject to intertemporal budget constraints. The consumer saves by holding money, domestic bank deposits, and foreign currency. He requires money for transactions purposes, but his demand for money is sensitive to changes in the inflation rate. The consumer pays taxes on his consumption, and does not have any direct contact with the underground economy. That is, he pays the full nominal rates under all circumstances. The specific form of the consumer's problem is given in Appendix II.

## Government

The government collects personal income, corporate profit, and import duties. It pays for the production of public goods, as well as for subsidies. In addition, the government must cover both domestic and foreign interest obligations on public debt. The deficit of the central government in period 1,  $D_1$ , is then given by:<sup>5</sup>

$$D_1 = G_1 + S_1 + r_1 B_0 + r_{F1} e_1 B_{F0} - T_1 \quad (6)$$

---

<sup>4</sup> We use two consumer categories in order to correspond to available country data classifications, as described in the next section.

<sup>5</sup> As before, 1 denotes period  $i$  and 2 denotes period  $i+1$ .

where  $S_1$  represents subsidies given in period 1,  $G_1$  is spending on goods and services, while the next two terms reflect domestic and foreign interest obligations of the government, based on its initial stocks of debt.  $T_1$  represents tax revenues, which is partially determined by firms' entry into the underground economy.

The resulting deficit is financed by a combination of monetary expansion, as well as domestic and foreign borrowing. If  $\Delta y_{BG1}$  represents the face value of domestic bonds sold by the government in period 1, and  $C_{F1}$  represents the dollar value of its foreign borrowing, then its budget deficit in period 2 is given by:

$$D_2 = G_2 + S_2 + r_2(\Delta y_{BG1} + B_0) + e_2 r_{F2}(C_{F1} + B_{F0}) - T_2 \quad (7)$$

where  $r_2(\Delta y_{BG1} + B_0)$  represents the interest obligations on its initial domestic debt plus borrowing from period 1, and  $e_2 r_{F2}(C_{F1} + B_{F0})$  is the interest payment on the initial stock of foreign debt plus period 1 foreign borrowing.

The government finances its budget deficit by a combination of monetization, domestic borrowing, and foreign borrowing. We assume that foreign borrowing in period  $i$ ,  $C_{Fi}$ , is exogenously determined by the lender. The government then determines the face value of its bond sales in period  $i$ ,  $\Delta y_{BGi}$ , and finances the remainder of the budget deficit by monetization. Hence:

$$D_i = P_{Bi} \Delta y_{BGi} + P_{Mi} \Delta y_{Mi} + e_i C_{Fi}$$

## Foreign Sector

The foreign sector is represented by a simple export equation in which aggregate demand for exports is determined by domestic and foreign price indices, as well as world income. The specific form of the export equation is:

$$\Delta X_{n0} = \sigma_1 \left[ \frac{\pi_1}{\Delta e_i + \pi_{Fi}} \right] + \sigma_2 \Delta y_{wi}$$

where the left-hand side of the equation represents the change in the dollar value of exports in period  $i$ ,  $\pi_1$  is inflation in the domestic price index,  $\Delta e_i$  is the percentage change in the exchange rate, and  $\pi_{Fi}$  is the foreign rate of inflation. Also,  $\Delta y_{wi}$  represents the percentage change in world income, denominated in dollars. Finally,  $\sigma_1$  and  $\sigma_2$  are corresponding elasticities.

The combination of the export equation and domestic supply responses determines aggregate exports. Demand for imports is endogenous and is derived from the domestic consumers' maximization problems. Foreign lending is assumed to be exogenous. Thus gross capital inflows are exogenous, but the overall change in reserves is endogenous. Finally, we will suppose that the exchange rate is fixed.

## DATA SOURCES AND BEHAVIORAL EQUATIONS

In order to simulate our model we have used a variety of data sources and parameter estimates for Egypt. We will first describe these sources present the estimation of the behavioral parameters of money demand and export supply for the Egyptian economy.

### Data Sources

#### Production

The input-output structure of intermediate and final production is derived from the Social Accounting Matrix SAM. Egypt (1997). This SAM is given in El-Said, Lofgren, and Robinson (2001) and the matrix itself is given in Appendix III. The underlying input-output matrix is 14 x 14 so that our version of this matrix is 15 x 15 with row 15 being imports. This matrix is also given in Appendix IV.

Real value added per unit output for each of the 14 domestic sectors is derived from the corresponding shares of wages and gross operating surpluses in each sector's value added. The government is assumed to have a Cobb-Douglas production function whose coefficients are those of the aggregate economy. Finally, in the absence of direct estimation of investment functions, we have taken the functions to be the same for each type of capital. The coefficients of these functions are taken to be those of the value added function for the construction industry. Even though the functions are the same, it does not imply that the levels of investment in the different capital types will be identical. This is because investment depends on the interest rate and the rate of return to capital, which may differ across capital types.

### **Effective Tax Rates**

We use direct sources from Egypt for our tax structures. Sources include: Law of customs Duties No66 of year 1963, Social Insurance Law no 79 for 1975, Law of Stamp Duties No 111 of year 1980, Law of Sales Taxes No 11 of year 1991 and No 2 of year 1997, Law of Income Taxes No 91 of year 2005, Treasury Bill Law No 114 for 2008, Decree of Ministry of Finance no 157 for 2010, Social Insurance Law No 135 of year 2010 that will be implemented in 2012 , Ministerial decree on Sales Tax No 49 for 2011.

### **Consumption**

There are two domestic consumer categories: urban and rural. We take consumption weights on each of the 15 input-output goods as the expenditure shares in the input-output matrix. We assume that there is a single foreign consumer, representing the rest of the world. These consumers' demand weights are given by export expenditure shares.

### **Initial stocks**

All initial allocations of factors and financial assets are taken to be stocks at the end of 2001. Stocks of urban and rural labor are obtained by applying the shares of income going to urban and rural labor (Egypt SAM) to 2001 Egyptian GDP. Money stocks are taken as M2 for 2001. Initial holdings of interest bearing assets as well as foreign assets are taken as total government domestic debt found in the CBE Monthly Statistical Bulletin. The stock of land is derived from the real value added to agriculture found in the Egypt SAM as the gross operating surplus of the agricultural sector (Columns 1-6) in 2001. Finally, capital stocks are determined as the gross operating surpluses of the corresponding aggregate sectors in the Egyptian SAM.

## Estimation of Behavioral Equations

### Money Demand

The demand for money is taken from El-Shazly 2009. The specific form we use is the long run demand for real broad money

$$(m_2 - p)_t = 2.278 + 0.962 y_t - 0.010 i_t^d + 0.041 r_t^f - 0.032 q_t - 0.032 \pi_t$$

The terms on the right hand side of the equation are, respectively, real income, domestic interest rate, foreign interest rate, real exchange rate, and inflation rate. All of these are generated within our simulations, with the foreign interest rate being exogenous.

### Export Supply

We use Ikram 2006, in which an Egyptian export price elasticity of -1.03 is given, while the world income demand elasticity is approximately 1.0. We assume that total world expenditure on Egyptian exports is divided into demand for the input-output goods according to the shares of exports from each sector in the SAM.

## APPENDIX

## Appendix I

Table 1. Base Case Calibration

Period	2001	2002	2003	2004	2005	2006	2007	2008
Nominal GDP	100	106.1	123.1	152.5	192.8	256.3	282.3	310.7
Real GDP	100	113.4	113.9	117.4	129.7	134.1	144.3	139.1
Real GDP growth rate		13.4	0.5	3.1	10.4	3.4	7.6	-3.6
Egypt Growth Rate	0	3.2	4.1	4.5	6.8	7.1	7.2	4.7
Egypt Real GDP	100	103.2	107.4	112.2	119.9	128.4	137.7	144.1
Inflation		-6.4	15.5	20.2	14.5	28.5	2.4	14.2
Price Level	100	93.6	108.1	129.9	148.7	191.1	195.7	223.4
Egypt Inflation	0	6.8	11.7	6.2	4.2	11	11.7	16.2
Egypt CPI	100	106.8	119.3	126.7	132	146.5	163.7	190.2
Nominal interest rate	17.2	3.4	21.6	6.1	30.8	14.2	26.1	17.2
Egypt nominal rate	7.8	8.3	8.4	10.2	8.8	8.7	7	11.3
Budget surplus	1.8	1.4	-5.4	-6.3	-7.8	-7.8	-11.8	-14.2
Egypt budget surplus	-2.5	-2.4	-8.3	-8.4	-8.2	-7.3	-6.8	-6.9
Trade Balance	9.8	14.2	1.2	7.7	-2.9	3.7	-3.5	-4.6
Egypt trade balance	-8.6	-8.1	-9.9	-11.5	-11.2	-12.4	-14.4	-13.4
Final Capital Stock				Share of Sector in Legal Economy				
				2002	2004	2006	2008	
K1	100		100	100	100	100	100	
K2	100		100	100	100	100	100	
K3	100		100	100	100	100	100	
K4	100		8.2	16.8	25.5	41.7		
K5	100		26.2	37.8	52.6	67.3		

1/ Index number based upon Base Case Calibration

2/ In percent

3/ Percent of GDP

4/ K1 = Mining

K2 = Manufacturing

K3 = Electricity, gas, construction

K4 = Services, retail trade

K5 = Public administration, health, education

5/ Present value of 8 period consumption stream evaluated by utility function.

**Table 2. FDI = 0, Foreign Borrowing = 0, Beginning in 2011**

Period	2011	2012	2013	2014	2015	2016	2017	2018
Nominal GDP	100	113.3	115.7	128.9	157.3	169.8	206.1	221.4
Real GDP	100	97.8	100.1	97.7	106	103.9	111.3	105.7
Real GDP growth rate		-2.2	2.4	-2.4	8.5	-2	7.1	-5
Inflation		15.8	-0.2	14.2	12.4	10.2	13.4	13.1
Price Level	100	115.8	115.6	132	148.3	163.4	185.2	209.5
Nominal interest rate	28.6	3.5	29.9	13.7	33.4	26.4	40.7	29.7
Budget surplus	-1	-0.8	-2.8	-4.4	-6.3	-8.7	-13.6	-15.5
Trade Balance	19.3	19.7	11.9	18.2	6.5	16.2	4.8	6.8
Final Capital Stock								
		Share of Sector in Legal Economy						
		2002	2004	2006	2008			
K1	100	100	100	100	100			
K2	100	100	100	100	100			
K3	100	100	100	100	100			
K4	100	7.2	12.6	19.8	41			
K5	100	24.7	36.2	52.5	72.9			

Rural Consumer Utility  
100

1/ Index number based upon Base Case Calibration

2/ In percent

3/ Percent of GDP

4/ K1 = Mining

K2 = Manufacturing

K3 = Electricity, gas, construction

K4 = Services, retail trade

K5 = Public administration, health, education

5/ Present value of 8 period consumption stream evaluated by utility function.

**Table 3. Initial FDI Inflow into each Sector Equal to 33% of Initial Sectoral Capital**

Period	2011	2012	2013	2014	2015	2016	2017	2018	
Nominal GDP	93.5	111.7	102.8	124.8	129	155.5	163.3	180.6	
Real GDP	116.8	111.7	116.3	111.8	121.6	117.5	127.7	119.8	
Real GDP growth rate		-4.3	4.1	-3.9	8.8	-3.4	8.8	-6.2	
Inflation		24.8	-11.6	26.2	-4.9	24.8	-3.5	17.9	
Price Level	80.1	100	88.4	111.6	106.1	132.4	127.8	150.7	
Nominal interest rate	27.2	-3.6	33.2	6.9	42.1	19.7	45.6	26.8	
Budget surplus	-1.9	-1	-3	-3.3	-5.9	-6.7	-9.9	-11.4	
Trade Balance	22.6	18.9	17.2	17.7	14.4	17.6	13.4	13.5	
Final Capital Stock									
			Share of Sector in Legal Economy						
			2002	2004	2006	2008			
K1	118		100	100	100	100			
K2	122.2		100	100	100	100			
K3	116.8		100	100	100	100			
K4	129.8		4.1	6.8	9	13.7			
K5	128		15.7	20.3	25.9	33.2			

Rural Consumer Utility  
83.8

1/ Index number based upon Base Case Calibration

2/ In percent

3/ Percent of GDP

4/ K1 = Mining

K2 = Manufacturing

K3 = Electricity, gas, construction

K4 = Services, retail trade

K5 = Public administration, health, education

5/ Present value of 8 period consumption stream evaluated by utility function.

**Table 4. FDI Value is Given as Cash Transfer to Rural Consumers**

Period	2011	2012	2013	2014	2015	2016	2017	2018	
Nominal GDP	102.7	119.4	118.1	130.3	161	173.8	217.5	228.3	
Real GDP	99.3	97.4	99.9	97.2	105.7	103.2	110.6	105.4	
Real GDP growth rate		-2	2.6	-2.8	8.8	-2.4	7.2	-4.7	
Inflation		18.6	-3.6	13.5	13.6	10.6	16.7	10.2	
Price Level	103.4	122.7	118.2	134.1	152.3	168.4	196.6	216.6	
Nominal interest rate	27	2.5	29.5	15.2	33.3	26.6	36.8	29.2	
Budget surplus	-0.7	-0.2	-3.3	-5.1	-7.2	-9.7	-13.3	-15.8	
Trade Balance	18	16.7	10.4	17.1	5.2	14.7	2.1	5.4	
Final Capital Stock									
			Share of Sector in Legal Economy						
			2002	2004	2006	2008			
K1	101.1		100	100	100	100			
K2	100.1		100	100	100	100			
K3	100.1		100	100	100	100			
K4	101.2		9.5	14.5	24	47.8			
K5	100		27.3	36.8	53.9	80.5			

Rural Consumer Utility

123.3

1/ Index number based upon Base Case Calibration

2/ In percent

3/ Percent of GDP

4/ K1 = Mining

K2 = Manufacturing

K3 = Electricity, gas, construction

K4 = Services, retail trade

K5 = Public administration, health, education

5/ Present value of 8 period consumption stream evaluated by utility function.

## Appendix II

Here, and in what follows, we will use  $x$  to denote a demand variable and  $y$  to denote a supply variable. In order to avoid unreadable subscripts, let 1 refer to period  $i$  and 2 refer to period  $i + 1$ . The consumer's maximization problem may be viewed as a standard intertemporal optimization, however subject to a number of constraints. If we consider the set of equations below, the objective function is to maximize consumption of goods and leisure over time. The left-hand side of equation (5a) represents the value of consumption of goods and leisure, as well as of financial assets. The next two equations contain the value of the consumer's holdings of capital and labor, as well as the principal and interest that he receives from the domestic and foreign financial assets that he held at the end of the previous period. The equation  $C_i = N_i$  then imposes a budget constraint in each period.

Equation (5b) says that the proportion of savings made up of domestic and foreign interest bearing assets depends upon relative domestic and foreign interest rates, deflated by the change in the exchange rate. Equation (5d) is a migration equation that says that the change in the consumer's relative holdings of urban and rural labor depends on the relative wage rates. Equation (5c) is a standard money demand equation in which the demand for cash balances depends upon the domestic interest rate and the value of consumption.

Formally, the consumer's problem is then given by equation 5. The definition of the notation follows.

$$\max U(x), \quad x = (x_1, x_{L_{u1}}, x_{L_{r1}}, x_2, x_{L_{u2}}, x_{L_{r2}}) \quad (5)$$

such that:

$$(1+t_i)P_i x_i + P_{L_{ui}} x_{L_{ui}} + P_{L_{ri}} x_{L_{ri}} + P_{M_i} x_{M_i} + P_{B_i} x_{B_i} + e_i P_{B_{Fi}} x_{B_{Fi}} = C_i \quad (5a)$$

$$P_{K1} K_0 + P_{A1} A_0 + P_{L_{u1}} L_{u1} + P_{L_{r1}} L_{r1} + P_{M1} M_0 + r_0 B_0 + P_{B1} B_0 + e_1 P_{B_{F1}} B_{F0} + TR_1 = N_1$$

$$P_{K2}(1-\delta)K_0 + P_{A2} A_0 + P_{L_{u2}} L_{u2} + P_{L_{r2}} L_{r2} + P_{M2} x_{M1} + r_1 x_{B1} + P_{B2} x_{B1} + e_2 P_{B_{F2}} x_{B_{F1}} + TR_2 = N_2$$

$$C_i = N_i$$

$$P_{B2} x_{B2} = d_0 + d_1(1+t_2)P_2 x_2 + d_2 \left[ \frac{r_2 - \pi_2}{1 + \pi_2} \right] \quad (5b)$$

where:

$$\log P_{M_i} x_{M_i} = a + b \log(1+t_i)P_i x_i + c \log r_i \quad (5c)$$

$$\log(L_{ui}/L_{ri}) = a_1 + a_2 \log \frac{P_{L_{ui}} - P_{L_{ri}}}{P_{L_{ui}} + P_{L_{ri}}} \quad (5d)$$

$P_i$  = price vector of consumption goods in period  $i$ .

$x_i$  = vector of consumption in period  $i$ .

$C_i$  = value of aggregate consumption in period  $i$  (including purchases of financial assets).

$N_i$  = aggregate income in period  $i$  (including potential income from the sale of real and financial assets).

$t_i$  = vector of sales tax rates in period  $i$ .

$P_{L_{ui}}$  = price of urban labor in period  $i$ .

$L_{ui}$  = allocation of total labor to urban labor in period  $i$ .

$x_{L_{ui}}$  = demand for urban leisure in period  $i$ .

$P_{Lri}$  = price of rural labor in period  $i$ .

$L_{ri}$  = allocation of total labor to rural labor in period  $i$ .

$x_{Lri}$  = demand for rural leisure in period  $i$ .

$a_2$  = elasticity of rural/urban migration.

$P_{Ki}$  = price of capital in period  $i$ .

$K_0$  = initial holding of capital.

$P_{Ai}$  = price of land in period  $i$ .

$A_0$  = initial holding of land.

$\delta$  = rate of depreciation of capital.

$P_{Mi}$  = price of money in period  $i$ . Money in period 1 is the numeraire and hence has a price of 1.

$x_{Mi}$  = holdings of money in period  $i$ .

$P_{Bi}$  = discount price of a certificate of deposit in period  $i$ .

$\pi_i$  = domestic rate of inflation in period  $i$ .

$r_p$   $r_{Fi}$  = the domestic and foreign interest rates in period  $i$ .

$x_{Bi}$  = quantity of bank deposits, that is, CD's in period  $i$ .

$e_i$  = the exchange rate in terms of units of domestic currency per unit of foreign currency in period  $i$ .

$x_{BFi}$  = quantity of foreign currency held in period  $i$ .

$TR_i$  = transfer payments from the government in period  $i$ .

$a, b, \alpha, \beta$  = estimated constants.

$d_i$  = constants estimated from model simulations.

## Appendix III: Egyptian Social Accounting Matrix (SAM)

		Social Accounting Matrix SAM, Egypt (1997 Current L.E. Bil.)																
		LABAGR	LAB-AGR	LAB-NAGR	CAP	IND	RI	R2	R3	R4	R5	UI	U2	U3	U4	U5	GOV	ROW
1	LABAGR																	
2	LAB-NAGR																	
3	CAP																	
4	IND																	
5	RI	2,0540	2,3800	4,1381	1,3152													
6	R2	2,2727	3,0261	3,8925	1,8821													
7	R3	1,9042	3,7485	8,8673	2,9355													
8	R4	1,4416	3,5358	12,6709	4,2848													
9	R5	1,0055	4,9288	22,4809	7,5874													
10	UI	0,3406	5,5352	4,3342	0,1639													
11	U2	0,4427	7,6224	6,6776	0,2840													
12	U3	0,9012	9,6839	10,7017	0,3407													
13	U4	0,3871	9,9839	18,7337	0,6353													
14	U5	0,4423	15,8748	40,3315	0,9137													
15	GOV			11,4230														
16	ROW																	
17	SAVINV																	
18	EXCISE-A																	
19	EXCISE-A																	
20	EXCISE-A																	
21	EXCISE-A																	
22	COTTSA																	
23	ANAGRA-A																	
24	POODR-A																	
25	OL-A																	
26	TEXT-A																	
27	CHDA-A																	
28	ELCC-A																	
29	CNST-A																	
30	OSER-V-A																	
31	OSER-V-A																	
32	EXCISE-C																	
33	EXCISE-C																	
34	EXCISE-C																	
35	EXCISE-C																	
36	COTTSA																	
37	ANAGRA-C																	
38	POODR-C																	
39	OL-C																	
40	TEXT-C																	
41	CHDA-C																	
42	ELCC-C																	
43	EXCISE-C																	
44	CNST-C																	
45	OSER-V-C																	
46	OSER-V-C																	
47	TRAX																	
48	TRAX																	
49	SEI																	
50	TAR																	
51	TAR																	
52	TAR																	
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POOR-C OIL-C	TRNT-C	QIND-C	BEPC-C	QNST-C	QSRVPC	QSRV-C	DPAX	ITAX	SETH	TAR	TOT
											11,399
											11,464
											1,063,019
										0.6615	20,038
											10,936
											14,320
											19,110
											23,989
											39,996
											11,243
											16,234
											22,971
											32,017
											62,236
											49,967
											65,289
											45,400
											9,442
											11,481
											12,969
											12,497
											3,178
											17,116
											90,914
											19,136
											34,220
											56,636
											6,979
											33,731
											25,590
											147,490
											147,464
											3,257
											12,839
											167,465
											32,446
											18,714
											54,832
											29,953
											18,144
											18,144
											7,174
											34,563
											26,100
											1,509,112
											14,570
											12,800
											41,340
											81,230
2,072	5,698	11,609	39,142				8,172	14,910	12,910		8,120
											65,289
											45,400
											9,442
											11,481
											12,969
											12,497
											3,178
											17,116
											90,914
											19,136
											34,220
											56,636
											6,979
											33,731
											25,590
											147,490
											147,464
											3,257
											12,839
											167,465
											32,446
											18,714
											54,832
											29,953
											18,144
											18,144
											7,174
											34,563
											26,100
											1,509,112
											14,570
											12,800
											41,340
											81,230
0.926	0.510	0.373	2.594	0.146	0.812	0.510	3.240				0.197
											3,079
0.361	0.006	0.182	6.653								0.197
54,472	25,313	36,103	105,036	7,124	34,563	26,100	158,912	14,910	12,910	41,340	81,230



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# OUTCOMES-BASED ASSESSMENT OF SUPPLEMENTAL TUTORING IN EGYPT

Evidence from the Egyptian Labor Market  
Panel Survey

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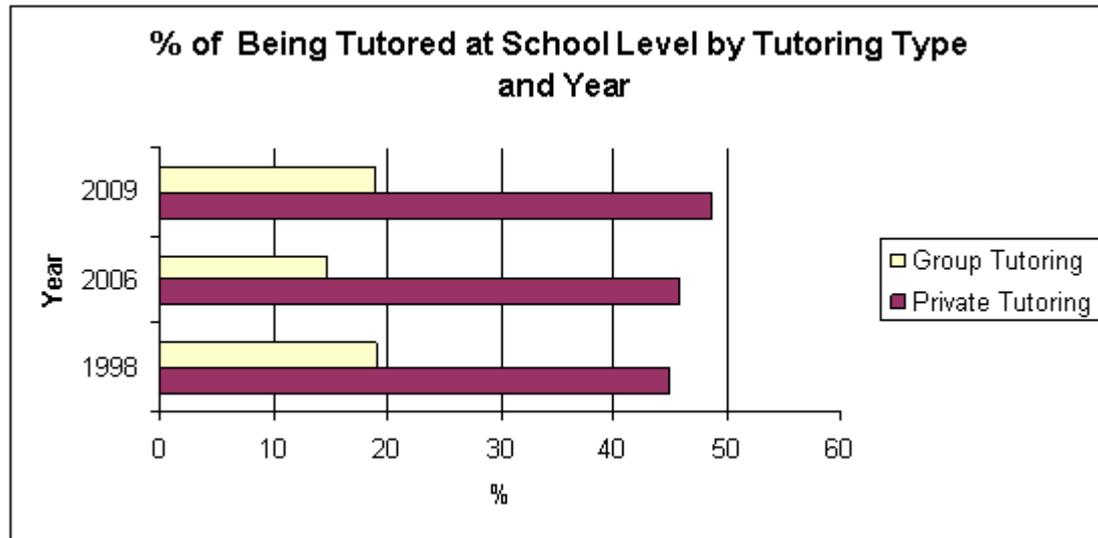
May Gaddala, Cairo University  
Mary Beth Walker, Georgia State  
University

June, 2013

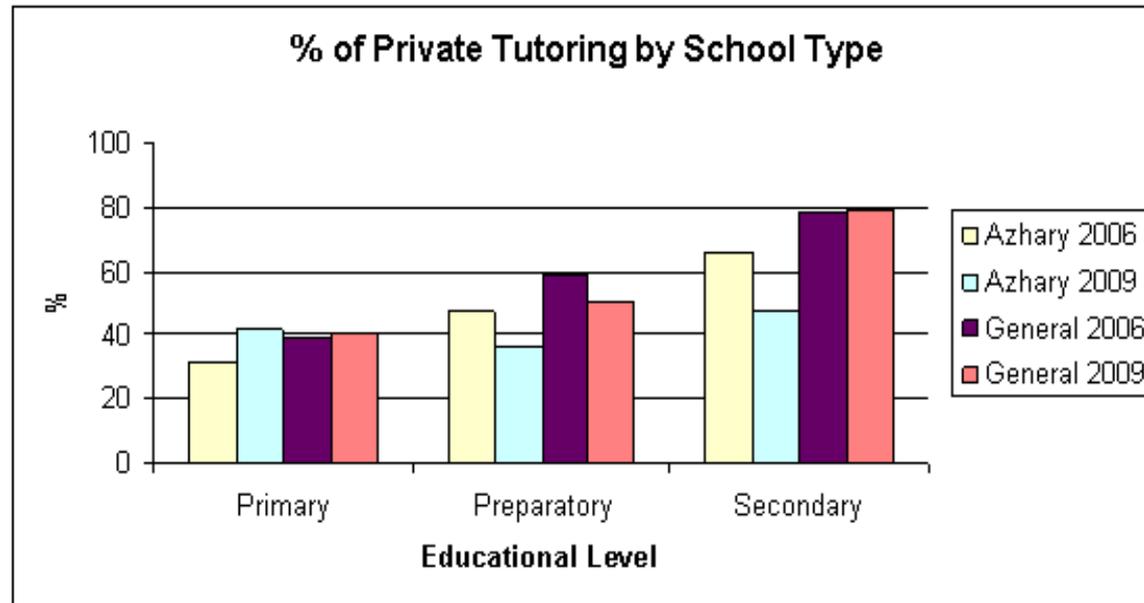
# Introduction and motivation

- Education is a driver of growth.
- Families believe in more and better education for their children.
- Business of private tutoring is growing.
  - Huge business in developing world.
  - Evidence of growth in developed countries as well.

There is a high incidence of tutoring in Egypt.



# Incidence of private tutoring by school type



# Supplemental education as a policy issue

What does the high incidence of private tutoring tell us?

- Tastes for education.
- Concern about quality of public education.
- University entrance exams.

# But does private tutoring have an impact?

Outcomes that matter include

- Test scores
- Entrance into university
- Labor market success
  - 'Waged' jobs
  - Participation in labor force
  - Wages

# Our study

We estimate the impact of private, supplemental tutoring on both academic achievement and labor market outcomes.

- First set of models measures the impact of tutoring on post-intermediate educational achievement.
- Second set of models measures the impact of tutoring on the probability of labor force participation for females.
- Third set of models measures the impact of tutoring on the probability of obtaining waged work for males.

We use both the intensity of tutoring (expenditures) and whether or not tutoring occurred.

# DATA

Variable	Mean	Std. deviation	Minimum	Maximum
Higher educational achievement (above Intermediate or University)	0.192	0.394	0	1
In/Out labor force (Females)	0.478	0.50	0	1
Waged vs. Non Waged (Males)	0.75	0.44	0	1
Expenditures on tutoring	153.5	404.7	0	6000
Tutoring received	0.422	0.49	0	1
Individual age in 1998	12.4	4.06	6	24
Gender (Male 1, Female 0)	0.54	0.5	0	1

# Data

Variable	Mean	Std. deviation	Minimum	Maximum
Average years of Education within Qism	6.54	2.43	1.74	14.2
Sibling	2.5	1.55	0	9
Public or azhary school vs. Private	0.88	0.32	0	1
Father's education				
Mother's education				
Wealth score	0.033	0.94	-2.04	2.04
Urban (1) or Rural (0)	0.65	0.48	0	1
Average expenditures on tutoring in Qism	352.5 Egyptian pound	332.5	28	2740

# Estimation framework

The equation of interest can be written:

,

Where represents the outcome variable. These include:

- whether the individual attends secondary school or more
- Whether the individual obtains a 'waged' job (male)
- Whether the individual participates in the labor force (female)

And is one of the two measures of private tutoring, either whether or not tutoring was received, or the total expenditures on tutoring.

# Estimation, continued

The first stage of the estimation for most models uses:

For the labor force participation equations, we use:

## Results: Private Tutoring and education outcomes

Measures of tutoring	2SLS	Probit	Probit IV
Expenditures on private tutoring	-0.0003 (0.0004)	0.0005** (0.0002)	-0.0023** (0.0011)
Coefficient on instrument in first stage (expenditures by other households)	0.0946** (0.045)	-	0.0946** (0.045)
F-statistic on instrument	4.33		4.33
Private tutoring received (0-1)	0.2157 (0.239)	0.2128* (0.126)	1.666*** (0.536)
Coefficient on instrument in first stage (expenditures by other households)	-0.00014** (0.00006)	-	-0.00014** (0.00006)
F-statistic on instrument	5.43	-	5.43
	N=1151	N= 1164	N=1151

# Results: Private tutoring and waged jobs (males)

Measures of tutoring	2SLS	Probit	Probit IV
Expenditures on private tutoring	0.0005 (0.0004)	0.0001 (0.0002)	0.0017* (0.0009) [0.0006*]
Coefficient on instrument in first stage (expenditures by other households)	0.1955** (0.092)	-	0.195** (0.092)
F-statistic on instrument	4.51	-	4.58
Private tutoring received (0-1)		-0.1123 (0.128)	-1.983*** (0.243)
Coefficient on instrument in first stage (expenditures by other households)		-	-0.00006 (0.00005)
F-statistic on instrument			1.61
	N=845	N=854	N=847

# Results: Private tutoring and labor force participation (females)

Measures of tutoring	2SLS	Probit	Probit IV
Expenditures on private tutoring	0.0006* (0.0003)	0.0004*** (0.0001)	0.0016*** (0.0006) [0.0006***]
Coefficient on instrument in first stage (expenditures by other households)		-	0.236*** (0.090)
Coefficient on instrument in first stage (siblings)		-	-15.906** (7.922)
F-statistic on instruments		-	
	N=948	N=972	N=948

# Results: Private tutoring and labor force participation (females)

Measures of tutoring	2SLS	Probit	Probit IV
Private tutoring received (0-1)		0.1493 (0.111)	2.102*** (0.034) [ ]
Coefficient on instrument in first stage (expenditures by other households)		-	0.00002 (0.00007)
Coefficient on instrument in first stage (siblings)		-	-0.002 (0.009)
F-statistic on instruments		-	
	N=948	N=972	N=948

# Further steps

- Additional empirical work:
  - Split sample for higher educational achievement into males and females (concern about instrument only affecting females).
  - Use exact same set of covariates, for comparison purposes.
  - Look for differences across cohorts.
- Interpretation

# **Is Fiscal Decentralization Harmful to Business Climate?**

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Assignment of functions to levels of government that are closer to people increases accountability of government officials. Decentralization is therefore deemed to increase efficiency in service delivery. At the same time, the effects of decentralization on the regulatory environment of the state are less clear. Multiple jurisdictions may or may not coordinate development and implementation of regulatory regime. In this paper we attempt to examine to what extent business environment is affected by the degree of decentralization, with reference to the discussion on the correlation of decentralization with economic growth. This attempt contributes to this discussion by focusing on business environment as a more immediate consequence of multi-tiered government in a country and seeking to draw clearer linkages between subnational mandates and attributes of business environment.

Different levels of government variously define business environment in a country using tax and regulatory instruments. In taxation, tax administration as well as tax policy influences business decisions. Tax policy potentially affects profit margins and may figure into investment decisions. The complexity of tax administration, its equitable application and credibility appear as costs for doing business. Complex tax systems require allocation of resources in business entities to achieve compliance, almost akin to cost of doing business in a particular location. Where tax administration has placed a higher number of formalities for payment of taxes, businesses spend more time in filing returns. At the same time, unpredictability of tax regimes may discourage investment or channel it toward only certain sectors resulting in inefficiency.

Doing Business reports by the World Bank capture some but not all aspects of the relationship of taxation and other regulatory requirements with business environment. A number of indicators serve as comparable proxies for the complexity of tax system. The ease of doing business has been evaluated for different countries over the years since 2004. The World Bank has compiled a number of survey based measures to assess business environment. We used data from Doing Business and WDI reports to take into account these measures. The survey responses are collated into these measures for the country and are reported as averages indicators. Table 1 lists the indicators of business environment used by Doing Business assessments.

## What is DB and? Waves of data collection

Some of the indicators listed in Doing Business reports represent functional aspects of taxation or regulatory environment in a country. For example, one indicator is time taken to prepare and pay taxes. It captures the cost of filing taxes which is somewhat comparable across countries. Despite the number of hours reflecting a level of effort for filing taxes, the cost of doing say depends upon labor costs. Looking at the definitions it is expected that the business environment indicators attempt to capture the hurdles various government systems create for conduct of business. Most of these measures take into account the steps required for compliance with government regulation and tax administration. Out of these measures, most are clearly not related with local government. Some of the measures, like number of taxes filed and time taken to prepare and pay taxes, would be difficult to attribute separately to central or local government. However, it is possible to argue that decentralization will have a marginal effect on these indicators. These could pick up the aggregate effect of central and local government administrative measures to requiring businesses to remain compliant. Another set of indicators that includes obtaining construction permits and registration of property, on the other hand, is more likely to indicate the effect of local government regulations and tax administration on businesses.

### **Decentralization to Economic Growth: A Quest for a Plausible Mechanism of Causality**

There has been a growing interest in studying the relationship between fiscal decentralization and economic growth. This interest stems from the expected benefits of fiscal decentralization and at the same time from its potential dangers. This in either way would be reflected in enhancing or deteriorating economic growth. Proponents of decentralization base their assumptions on widely differing criteria, ranging from expected improvements in allocative efficiency, public service delivery, welfare and equity, through to increased participation, accountability and responsiveness on the part of local authorities. At the same time, threats of decentralization include its effects on macroeconomic stability and equity or redistribution issues. A key ingredient missing in these discussions is the mechanism through which decentralization may plausibly affect economic growth. Whether it is through improvements in service delivery and higher investment in local public infrastructure or through effects on local

regulatory environment; or is it through improvement taxation and expenditure systems. Indirectly, decentralization may also stabilize a country politically by giving higher stakes in government to diverse groups of population and minorities. Without a reference to such mechanisms through which decentralization may affect economic growth, tracking the effects of decentralization on economic growth may not be very meaningful. Even if a relationship were established, it would not provide specific policy guidance to shape up political arrangement in a country that heightens the prospects of growth.

The debate regarding the impact of fiscal decentralization on economic growth led to an impressive massive array of empirical studies. Most of which are based on studying the direct relationship or correlation between both variables -measured through different indicators- and where the direction of causality is assumed from fiscal decentralization to growth. As mentioned before, these studies do not attempt to delve into the mechanisms through which decentralization may plausibly affect prospects of economic growth. No wonder that the empirical evidence regarding the relation between decentralization and growth is conflicting or non-existent.

On one hand, some studies showed that fiscal decentralization may give positive contribution to economic growth. For example, Zhang and Zhou (2001), for the case of India, found that fiscal decentralization is positively associated with the state economic growth. Moreover, a direct relationship between revenue decentralization and growth in per capita GDP was found in Spain. However, this relation was true at levels less than a certain optimum level, beyond which the relation would become insignificant (Cantarero and Gonzalez, 2009). However, Iimi, (2004) found that decentralization on the fiscal expenditure side, not the revenue one, is instrumental in economic growth. Only some studies attempted to go beyond the establishing a relationship and looking at what lies behind the correlation. In two such cases, the positive relation between fiscal decentralization and growth is established through reducing corruption and increasing governance (de Mello and Barenstein, 2001; Thimmaiah, 2000).

On the other hand, the synthesis that decentralization will bring higher efficiency to the public sector and therefore leads to higher economic growth is not always true in the implementation. A famous study by Zhang and Zhou (2001) for the case of China has shown opposite outcomes. They discovered a consistently significant negative association between fiscal decentralization

and provincial economic growth. A recent study by Tosun and Yilmaz (2010) emphasized the importance of economies of scale in public service provision, preventing the potential benefits of fiscal decentralization. At the same time, they found a weak, or no, evidence that Tiebout-style local government competition may have enhanced economic efficiency. At the same time, other studies found that fiscal decentralization in Mexico and the USA seemed to operate in an opposite direction than that predicted by the 'efficiency through devolution' hypothesis. Even when structural factors that may have an impact on economic growth have been controlled for (Bwire and Rodriguez -Pose, 2004).

Some other empirical studies failed to find a clear relationship between the two variables. For example, concerning expenditure decentralization; other factors like capital stock, human capital, population growth, lagged per capita GDP, inflation levels, and unemployment rates were found to go much further toward explaining growth in per capita income. Therefore, what really matters is the amount, not which administration actually does the expenditure (Cantarero and Gonzalez, 2009). Moreover, Thornton (2006) concluded that the impact of revenue decentralization on economic growth in OECD economies has not been statistically significant. This was explained by the fact that the indicators commonly used to measure revenue decentralization usually fail to take account of the extent of the independent taxing powers available to sub-national governments.

Another strand in the literature begins to unravel the measures of decentralization. Measurement of decentralization is surprisingly difficult. And, if one cannot be confident of measuring the independent variable, then one cannot state with much confidence that decentralization is associated with one or more outcomes (Bird, 2000). In this regard, Ebel and Yilmaz (2002) pointed out that most studies described the degree of fiscal decentralization as the subnational share of total government spending/revenue or of Gross Domestic Product . These measures, however, do not identify the degree of local expenditure autonomy. Thus, local expenditures that are mandated by the central government or are spent on behalf of central government appear as subnational expenditure. Moreover, these indicators do not distinguish the sources of tax and non-tax revenues, intergovernmental transfers, and other grants. Hence, it provides no information on whether revenues are collected through locally determined "own-source" revenues or are just "centrally-transferred" revenues.

Another aspect of the relationship between fiscal decentralization and growth is the one concerned with the direction of causality between the two variables. As aforementioned, most of the studies assumed a one-way causality from fiscal decentralization to economic growth; that is, as the degree of fiscal decentralization in the country increases, economic growth is expected to increase. However, many studies started to emphasize the existence of a two-way causation; fiscal decentralization affecting economic growth and at the same time is affected by it (Wang and You-huan, 2009; Hallwood and Ronald, 2008; Lin and Liu, 2000; Triesman, 2006).

Some studies of decentralization have attempted to link it to democracy. It is a common belief that there is a symbiotic relationship, where decentralization reinforces democratic governance and at the same time, democracy provides the basic mechanism for the realization of the efficiency gains associated with fiscal decentralization (Martinez-Vazquez and McNab, 1997). Despite this link, no evidence was found on the relationship between decentralization, growth and democracy. Some countries followed strong decentralization programs, accompanied with differing levels of democracy; however, the impact on growth was still not clear (Triesman, 2006).

These findings suggest an important point; the relationship between fiscal decentralization and growth is affected to a large extent by the homogeneity of the sample of countries studied. Wide disparities among the countries studied could affect the reliability of the results and lead to spurious relations. Using data in which the economic, political, and institutional differences between countries are substantial makes it difficult to determine the true effect of fiscal decentralization unless adjustments are made to the data in order to account for these differences (Akai and Sakata, 2002). Moreover, as we suggested earlier, the mechanism through which decentralization may plausibly affect economic growth has not been examined systematically but it has been mostly brought in as a speculative attempt to add meaning to the correlations.

Recently another array of the empirical studies started to consider an indirect effect of decentralization on economic growth and bring to forth the discussions mechanism through which decentralization may affect economic growth. In this regard, Martínez-Vázquez and McNab (2003, 2005) identified a number of possible channels that could transmit the impact of fiscal decentralization to economic growth; namely, consumer efficiency, producer efficiency,

geographical distribution of resources, macroeconomic stability, corruption, capture by elites, and price stability. Other studies considered also the impact through changing the tax burden (Hallwood and Ronald, 2008). Positive correlations between decentralization and educational achievement, investment in human capital and physical capital suggesting that these could be the mechanisms through which it may contribute to higher levels of per capita GDP (Blöchliger, Égert and Fredriksen, 2013).

One of the channels that connects fiscal decentralization to growth is related to government or public sector size. A famous study by Marlow (1988) found that the shifting of government responsibilities from the central to the state and local government sectors is a policy action that will contribute toward a slowing, or falling, of public sector size and growth in the United States. This supports the Leviathan view of government that models public sector behavior as driven by self-interest subject to constraints. In the same context, Kwon (2003) found a negative relationship between the degree of fiscal decentralization and the level of central government expenditure in Korea on one hand, and a positive relationship with the level of local government expenditure on the other hand. His findings suggest that fiscal decentralization plays a key role in improving the fit between provision of public goods and citizens' demand.

Other possible channels that link fiscal decentralization to growth are the channels of liberalization and globalization, privatization or marketization, and business environment. These channels, however, were not sufficiently examined directly; rather, most of the literature focused on the relation between the different channels and either fiscal decentralization or economic growth. This link still needs to be thoroughly studied. We attempt to look at a specific mechanism through which decentralization may plausibly affect growth, namely, the effects of decentralization on business environment. In recent years, this mechanism has come into focus.

Only recently, a study has used different state business climate rankings to estimate the relationship between fiscal decentralization and states' business climate scores (Roy, Dutta et al. 2012). The results show that decentralization is associated with a better business climate. The economic significance of the results are computed by estimating the change in the ranking of the average state, if it were to increase fiscal decentralization by 1 SD (which is equivalent to about a 9% increase in local share of state and local spending). The standard measure of fiscal

decentralization is the percentage of state and local government spending that is undertaken at the local level. As measures of the state business climate, they use the Milken Institute's National State Technology & Science Index, the Tax Foundation's State Business Tax Climate Index, and the Progressive Policy Institute's (PPI) New Economy Index, among others. They searched for the single year (2002) for which the largest number of these indices were available. The choice of year 2000 data for the decentralization measure (and all the other control variables) helps ensure that issues of endogeneity are minimized.

Another attempt has been made to review the impact of fiscal decentralization on the ownership shares of multinational firms in China under the assumption that fiscal decentralization increases the incentive for local governments to maintain economic prosperity and improve institutional environments for multinational firms (Wu and Teng, 2012). It finds that multinational firms located in regions with higher degrees of fiscal decentralization own larger shares of their foreign subsidiaries. This suggests that multinational firms respond to local fiscal decentralization by increasing their participation in investment. Kessing, Konrad et al. (2007) define two competing effects associated with fiscal decentralization. By seeking investment in local areas, fiscal decentralization makes local areas attractive to investment and thus has a horizontal dimension. But at the same time, once investments are made, local governments have an incentive to tax returns on investment, setting up a vertical dimension. They find that decentralization has a negative effect on cross border mergers and acquisitions.

Earlier Smith (2010) using a survey of mayors, city council members and executives from 13 countries in Latin America attempted to assess if they implemented pro-business policies. He shows that political autonomy and local business policies attract new businesses but fiscal autonomy does not matter. A similar study in Indonesia found that regional autonomy after decentralization did not affect business environment to any significant extent (Priyono and Akademika, 2003). In fact, Saad (2001) demonstrated that in Indonesia, the local governments upon gaining fiscal autonomy led to increase local revenues by imposing more local taxes and levies with a potential negative effect on local business climate. In this paper, we attempt to look at the effects of decentralization on indicators of business environment to establish a meaningful mechanism through which decentralization may affect economic growth. Even if the latter

relationship is not borne out, the effects of decentralization on promotion of business is a valid policy objective.

### **Data and Empirical Scheme**

We created a dataset by merging World Bank's Doing Business data with World Development Indicators. In addition, a number of variables were added to characterize the nature of politics. The source of the latter was World Bank's World Development Indicators accessed from the World Bank website. These include indicators from 2004 to 2011. In addition to these data, we retrieved the central government and subnational government expenditures and tax collections from the IMF's Government Finance Statistics, CD issued in 2011. From these variables, measures of decentralization were generated. Expenditure decentralization is defined as subnational expenditures divided by total government expenditures and tax decentralization as subnational tax collection divided by total tax collection.

The Doing Business data has two limitations. First, the time series starts in 2004 and ends in 2011, providing 8 observations for different countries for this time period. Second, the indicators reported in this data relate to a number of indicators of business environment which are not necessarily related to the domain of subnational or local government functions. In the absence of a complete mapping of assignment of functions for different countries, we are constrained to treat decentralization as comparable across countries. We assume that subnational authorities have comparable roles in affecting business environment across all countries. This is a strong but plausible assumption. The tax and regulatory instruments are mostly vested in central governments; on the other hand, subnational governments work through additional taxes or regulations, mostly of a local nature. Under each indicator, number of procedures, time taken to carry out the procedure and costs incurred on compliance with the procedure are listed. However, values may vary for each of these three categories. We have mostly used numbers and time taken as more data were available for these versions of the indicators.

Summary statistics of the variables were reviewed to ascertain the range of values. The doing business variables are presented in Table 2 along with the year range for which these are available. Similarly, the control variables and decentralization measures calculated from GFS are

presented in Table 3. The doing business indicators are measured as proxies for cost of doing business and measured in number of days, number of processes or monetary costs.

Decentralization measures, as per general practice, are in the form of ratios.

To add more here

To further review the doing business indicators, we looked at their pairwise correlations. The results are shown in the correlation matrix represented in Table 4 (to add more here).

Using 10 out of the doing business indicators, we estimated the effects of tax and expenditure decentralization measures separately on each of them. The general empirical model was:

$$Y_i = f(\text{decentralization}_j, x_k)$$

Where  $Y_i$  is a business environment indicator,  $\text{decentralization}_j$  is a measure of decentralization,  $j$ = tax decentralization, expenditure decentralization and  $x_k$  is a vector of control variables.

## Results

Using, 10 indicators of business environment, we estimated the effects of expenditure and tax decentralization on individual indicators. The results of the estimation of expenditure decentralization are reported in Table 5. The first set of estimations was carried out as OLS regressions with complete range of year and country dummies. The tax decentralization is positive and significant at 1 percent level showing that the number of tax payments is higher by 39 when country decentralization increases by 10 percentage points. In other words, there are 624 additional tax payments if decentralization increases by one standard deviation. In this table, the effect of decentralization on other business environment indicators is not statistically significant. The number of startup procedures and time required to set up business have negative signs on the coefficients but they are not significant. GDP per capita has a positive relationship with startup procedures and time required to start businesses. When manufacturing value added in an economy increases by 1 percent, time required to start business is reduced by .56 days and time resolve insolvency is reduced by .04 days. In these cases, size of the coefficients, even when they are significant, is very small. Another fact that comes to light is that in most cases, the

transition and developing country dummies have a positive relationship with the business environment indicators, demonstrating a higher cost of doing business in these countries. Time required to start up business is longer by 96 days compared with an industrialized country and it is significant at 10 percent level. For developing countries, there are 9 additional startup procedures to register business compared with industrialized countries and it significant at 5 percent level. Similar to the transition economies, it takes 93 more days in developing countries to startup business compared to the industrialized countries. The results for the time and country dummies are not shown in the table.

Continuing with the effect of tax decentralization on business environment indicators, we estimated the effects on another 5 business environment indicators. These are reported in Table 6. Tax decentralization is not statistically significant for any of the indicators.

Using subnational expenditure as a percent of total expenditure as a measure of decentralization, the effects were estimated for the same set of 10 business environment indicators. For the first 5 indicators, the results are reported in Table 7. The number of tax payments is positive and significant at 1 percent level indicating that with 1 percentage points increase in expenditure decentralization, the number of tax payments increases by 5.9. Another business indicator, hours spent to prepare and pay taxes is positive and significant at 10 percent level. It shows that with 1 percent increase in expenditure decentralization, the number of hours required to prepare and pay taxes rises by 194 hours. In these regressions, it is again worth noting that both transition and developing country dummies are positive and significant for some business environment measures, indicating a higher cost of doing business. The transition countries have 7 more startup procedures while the developing countries have 9 more procedures compared with industrialized countries. There are 26 number of additional tax payments in transition countries, 68 more days to start business in transition countries and 66 more days in developing countries in comparison to the time taken to start business in industrialized countries. Time to resolve insolvency is also longer by 2.2 years in transition countries and 1.5 years in developing countries.

In Table 8, the results for the second set of 5 business environment indicators are shown. Expenditure decentralization is negative and significant only for time to starting business. For 1 percent increase in expenditure decentralization, the time to starting business reduces by 22 days. The expenditure decentralization is not significant for any other business environment indicator.

The number of procedures is higher by 7 more procedures for developing countries compared with industrialized economies and starting business takes 71 days longer than in developing countries when compared with industrialized countries. Enforcement of contracts is the only variable where for transition countries it takes 254 days less compared with industrialized countries.

In order to account for time invariant country specific effects, we also estimated the effects of decentralization on business environment indicators using panel models. The results are reported in Tables 9 to 12. The first table, Table 9, shows the results of tax decentralization on 5 business indicators. Again the effect of tax decentralization is positive and significant on cost of doing business in case of two indicators, number of tax payments and time to resolve insolvency. For 1 percentage point increase in decentralization, there are 40 more tax payments as shown by the coefficient which is significant at 1 percent level. The time to resolve insolvency increases by .56 years with 1 percent increase in tax decentralization. The coefficient on tax decentralization is significant at 5 percent level. The results are plausible as they indicate that subnational governments may choose separate tax administrations requiring additional tax payments. This will be expected where decentralized entities are aiming to establish independence from central tax administrations. The increase in time to resolve insolvency could be due to additional requirements of certificates from local authorities. The control variables show that GDP does not have an important effect on business environment indicators. The coefficient, where significant, is very small. The percentage share of manufacturing value added is positive and significant at 1 percent level for 4 out of 5 indicators. With increase in the percentage share of manufacturing value added by 1 percentage point, the time required to start up business goes up by 1.5 days, time required to prepare and pay taxes by 25 hours and time to resolve insolvency by .05 years.

The results for the remaining 5 indicators are reported in Table 10. The procedures dealing with construction permits has a positive correlation with tax decentralization shown by the positive coefficient in column 3, which is significant at 5 percent level. It shows that with 1 percent increase in tax decentralization, the number of procedures to obtain a construction permit increases by 7. This is one indicator which is closely related to local government. Grant of construction permits is mostly within the purview of local governments and any delays could be largely attributed to their functioning. One interpretation of this result can be that when local

governments are more empowered, they seek to enforce more procedures. As a result, grant of construction permits become more cumbersome. Another indicator that is squarely within the purview of local government is registration of property. In column 4, the results show that the coefficient is positive but not significant.

Next in Table 11, we report the results of estimation for the first 5 business environment indicators using subnational expenditures as a percent of total expenditures as a measure of decentralization. In column 1, the coefficient on expenditure decentralization is negative and significant at 5 percent level. It shows that for a 10 percentage point increase in expenditure decentralization, there is a reduction of 4 procedures to register a business. On the other hand, in column 2, the coefficient on expenditure decentralization is positive and significant at 1 percent level showing that for a 10 percentage point increase in expenditure decentralization, there is an increase of 62 tax payments. Since this indicator is recorded in the number of payments and not necessarily a higher tax burden, it only signifies additional tax payments in numbers. This is a plausible finding showing that subnational governments with increased independence require additional payments in exercise of their powers. Tax decentralization is not significant in the remaining 3 columns. The percentage of manufacturing value added in GDP as before remains positive and significant in some cases.

In Table 12, the results show that expenditure decentralization is not significant in any of the 5 columns. For the two indicators of added interest, namely, number of procedure for construction permit and number of procedures for property registration, the coefficients are positive but not significant.

Decentralization is an outcome of political and institutional factors in any country. Various attempts have been made at explaining the outcome. It can be argued that decentralization and business environment are jointly determined by institutional factors in different countries. Politics, structure of the economy, size of the country, diversity of its population and history may affect decentralization as well as business environment. In order to further substantiate the results presented in Tables 13 to 16, we employ an instrumental variables model. Decentralization is treated as endogenous, annual population growth rate, access to improved drinking water and access to improved sanitation in urban areas are used as excluded instruments. All the other control variables are included instruments in the model. For all these estimations, the excluded

instruments are tested for validity and strength. The first stage F-Test values are reported in the tables and are always higher than the rule of thumb to determine the strength of the excluded instruments (ref). The values of Craig-Donald statistic computed for these equations are higher than the minimum bias threshold for the 10 percent maximal IV bias. The values are also higher than the critical values reported in Table 1 of Stock and Yogo (2005) demonstrating that the instruments are not weak. The Hansen J-Statistic p-values are also reported in the table showing that the instruments are valid.

Table 13 shows that tax decentralization only affects start up procedures to register a business and has a positive coefficient which is significant at 5 percent level. In the remaining columns the coefficient is not significant. Carrying over to the second set of business environment indicators, Table 14 lists the results of estimation of effect of tax decentralization on the second set of business indicators. In Table 14, the coefficient on tax decentralization in column 3 is again positive and significant at 1 percent level indicating that decentralization when increased by 10 percentage points leads to 81 additional procedures dealing with construction permits. This result corroborates the one in Table 6 but the size of the coefficient has increased here.. In the last column, the coefficient on tax decentralization becomes negative and significant at 5 percent level. This is a change in sign from the results in Table 6. The result shows that decentralization reduces the cost of enforcing contracts by reducing the number of days required to do so. The coefficient on tax decentralization is positive and significant at 10 percent level for the effect on number of procedures for registering property.

In Table 15, the coefficients for expenditure decentralization are not significant. In Table 16, the coefficient on expenditure decentralization is significant at 1 percent level and positive for number of procedures dealing with construction permits. It is again negative and significant at 5 percent level for time in enforcing contracts. The results from IV regression show that both tax and expenditure decentralization measures have a positive correlation with number of procedures dealing with construction permits and a negative correlation with time in contract enforcement. Out of these results, construction permits and registration of property are very likely within the functional assignment to local governments. In both cases, decentralization is correlated with a higher cost of doing business.

## Conclusion

Business environment is a key input in economic growth. Decentralization has been assumed to be another factor that influences growth. It is plausible to argue that part of the mechanism through which decentralization may affect economic growth is through shaping business environment in a particular way. Institutional arrangement arising out of decentralization, which have assigned functions and revenue sources to different tiers of government, may play out in various ways that affect costs of doing business in a particular country. The other mechanisms of decentralization affecting growth may operate through changes in service delivery, political stability and improvements in local infrastructure.<sup>1</sup> We have attempted to test one of these mechanisms, namely, the effect of decentralization on business environment. Treating it as an empirical question, we have demonstrated that the current set of indicators used to assess business environment do not have a high correlation with decentralization. In a few cases, where a statistically significant relationship is made out between decentralization and business environment, the results do not show that decentralization reduces the cost of doing business.

The results can be further improved as additional data becomes available on indicators that have a closer institutional linkage with subnational functions. The **xx** reports on doing business that look at cities and indicators relating to local government use a sample of cities in each country. The data are compiled over time and do not include a large number of countries. At present the sample size is small and limits the possibilities of empirical investigation.

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<sup>1</sup> A large share of investment in public infrastructure takes place through subnational mandates. In the USA, this share is as high as 67 percent of total public investment in infrastructure (,,,,).

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GFS data: Year range - 1972 – 2010, Source - 2011 CD Rom

Table 1  
Doing Business Indicators

Ease of Doing Business Rank	
Starting a Business	Rank
	Procedures (number)
	Time (days)
	Cost (% of income per capita)
	Paid-in Min. Capital (% of income per capita)
Dealing with Construction Permits	Rank
	Procedures (number)
	Time (days)
	Cost (% of income per capita)
Registering Property	Rank
	Procedures (number)
	Time (days)
	Cost (% of property value)
Getting Credit	Rank
	Strength of legal rights index (0-10)
	Depth of credit information index (0-6)
	Public registry coverage (% of adults)
	Private bureau coverage (% of adults)
Protecting Investors	Rank
	Extent of disclosure index (0-10)
	Extent of director liability index (0-10)
	Ease of shareholder suits index (0-10)
	Strength of investor protection index (0-10)
Paying Taxes	Rank
	Payments (number per year)
	Time (hours per year)
	Profit tax (%)
	Labor tax and contributions (%)
	Other taxes (%)
	Total tax rate (% profit)
Trading Across Borders	Rank
	Documents to export (number)
	Time to export (days)
	Cost to export (US\$ per container)
	Documents to import (number)
	Time to import (days)
	Cost to import (US\$ per container)
Enforcing Contracts	Rank
	Procedures (number)
	Time (days)
	Cost (% of claim)

Closing a Business	Rank
	Recovery rate (cents on the dollar)
	Time (years)
	Cost (% of estate)

Table 2  
Summary Statistics for Indicators of Business Environment (2004-2011)

Variable	Obs	Mean	Std.Dev.	Min	Max
Avg number of times firms spent in meetings with tax officials	225	2.731	2.609	0.15	16.56
Documents to export (Number)	1264	6.658	2.032	2	14
Documents to import (Number)	1264	7.526	2.433	2	20
- Ease of doing business index (1=most business-friendly regulations)	366	92.32	52.67	1	183
Informal payments to public officials (% of firms)	242	34.11	22.49	0	98.26
start-up procedures to register a business (number)	1572	8.722	3.494	1	28
Tax payments (number)	1264	31.18	21.19	3	147
Time required to start a business (days)	1572	42.05	56.93	1	694
Time to prepare and pay taxes (hours)	1264	302.1	276	0	2600
Time to resolve insolvency (years)	1444	2.998	1.549	0.4	10
No of Procedures (Starting a Business)	1382	8.903	3.49	0	28
Time in days (Starting a Business)	1382	42.94	56.54	0	694
Cost % of income per capita (Starting a Business)	1370	57.16	97.7	0	983.4
No of procedures (Dealing with construction permits)	1075	18.56	7.329	6	64
Time in days (Dealing with construction permits)	1066	208.8	116.2	25	778
No of procedures (Registering property)	1196	6.069	2.41	1	18
Time in days (Registering property)	1196	75.86	96.04	1	956
Cost % of property value (Registering property)	1196	6.395	5.411	0	30.8
Strenght of legal rights index: 0 – 10 (Getting Credit)	1236	5.184	2.435	0	10
Extent of disclosure index: 0 – 10 (Protecting Investors)	1081	5.062	2.498	0	10
No of payments per year (Paying Taxes)	1081	31.67	21.36	2	147
Time in hours per year (Paying Taxes)	1057	278.1	180.1	0	987
Total tax rate % profit (Paying Taxes)	1081	50.69	42.02	0.2	339.7
Time to export in days (Trading across borders)	1081	25.29	16.71	5	102
Time to import in days (Trading across borders)	1081	28.78	19.74	4	104
Time in days (Enforcing Contracts)	1244	533.9	184.4	120	990
Time in years (Closing a Business)	1200	3.026	1.589	0.4	10

Table 3

## Summary Statistics for Independent Variables

Variable	Obs	Mean	Std.Dev.	Min	Max
Subnat Tax % of Tot Tax	1482	0.202	0.16	0	1
Subnat Expd % of Tot Expd	1361	0.239	0.148	0.00056	1
GDP per capita (constant 2000 US \$)	6761	7096	11260	54.51	108111
GDP Growth (Annual %)	6791	3.624	6.289	-51.03	106.3
GDP per person employed (constant 1990 PPP \$)	3552	18076	14716	572	68126
Labor participation rate % of Tot population ages 15+	3870	63.39	10.43	38.3	90.4
Market capitalization of listed co's % of GDP	2234	48.53	59.78	0.00414	617
Average freedom house political rights & civil liberty scores (0-10)	5032	4.738	3.356	0	10
regime type(separating dominant multiparty systems)	5032	40.86	43.12	1	100
Wehner (2010) Leg Budget Power Measure	1790	0.542	0.366	0	1
Sub-National Electoral System	1456	0.341	0.726	0	2
Municipal Elections System	1843	0.296	0.675	0	2
Sub-National Role of Parties	1567	2.897	0.439	0	3
Manufacturing value added % of GDP	5150	14.65	8.038	0.213	46.4

Table 4  
Correlations Between Doing Business Indicators

	Ease of doing business index (1=most business-friendly regulations)	start-up procedures to register a business (number)	Tax payments (number)	Time required to start a business (days)	Time to prepare and pay taxes (hours)	Time to resolve insolvency (years)	No of Procedures (Starting a Business)
Ease of doing business index (1=most business-friendly regulations)	1						
start-up procedures to register a business (number)	0.525	1					
Tax payments (number)	0.469	0.263	1				
Time required to start a business (days)	0.342	0.436	0.0647	1			
Time to prepare and pay taxes (hours)	0.316	0.323	0.278	0.150	1		
Time to resolve insolvency (years)	0.555	0.352	0.253	0.292	0.241	1	
No of Procedures (Starting a Business)	0.533	0.933	0.281	0.401	0.369	0.360	1
Time in days (Starting a Business)	0.367	0.434	0.0848	0.973	0.169	0.306	0.434
No of procedures (Dealing with construction permits)	0.205	0.201	0.0849	-0.0465	0.144	0.136	0.221
No of procedures (Registering property)	0.413	0.299	0.204	0.0872	0.314	0.0846	0.316
Time in days (Enforcing Contracts)	0.324	0.232	0.0947	0.126	0.00920	0.184	0.219
	Time in days (Starting a Business)	No of procedures (Dealing with construction permits)	No of procedures (Registering property)	Time in days (Enforcing contracts)			
Time in days (Starting a Business)	1						
No of procedures (Dealing with construction permits)	-0.0402	1					
No of procedures (Registering property)	0.0987	0.0784	1				
Time in days (Enforcing Contracts)	0.130	-0.0423	0.153	1			

Table 5  
The Effect of Tax Decentralization on Business Environment

VARIABLES	(1) start-up procedures to register a business (number)	(2) Tax payments (number)	(3) Time required to start a business (days)	(4) Time to prepare and pay taxes (hours)	(5) Time to resolve insolvency (years)
Subnat Tax as % of Tot Tax % of Tot Tax	-0.1952 (2.520)	39.7154*** (10.297)	-9.7612 (11.202)	99.6750 (105.787)	0.5154 (0.418)
GDP per capita constant 2000 USD	0.0004*** (0.000)	0.0000 (0.000)	0.0024** (0.001)	0.0002 (0.015)	-0.0000 (0.000)
Manufacturing Value added % of GDP	-0.0559 (0.068)	-0.5600** (0.281)	-0.3021 (0.539)	20.3009 (17.315)	0.0404** (0.016)
GDP per person employed (constant 1990 PPP \$)	-0.0002** (0.000)	-0.0008** (0.000)	-0.0001 (0.001)	-0.0061 (0.007)	0.0000 (0.000)
Labor participation rate % of tot population ages 15+	0.0188 (0.111)	-0.8976* (0.514)	-0.8643 (0.895)	-0.6426 (4.139)	0.0270** (0.013)
Market capitalization of listed co's % of GDP	-0.0104*** (0.004)	0.0130 (0.012)	-0.0580** (0.023)	0.2073 (0.329)	0.0000 (0.000)
Transitional Countries	8.1050 (5.384)	21.7249 (14.729)	95.8959* (50.419)	195.9118 (374.978)	2.0244 (1.364)
Developing Countries	8.9924** (4.095)	-16.5136 (15.775)	92.8186** (39.260)	-280.7544 (371.038)	1.3499 (1.014)
Constant	6.9984 (9.721)	109.4924*** (41.924)	7.5977 (79.404)	361.9875 (432.854)	-1.8784 (1.971)
Observations	324	233	324	233	323
R-squared	0.903	0.986	0.794	0.882	0.982

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 6  
The Effect of Tax Decentralization on Business Environment

VARIABLES	(1) No of Procedures (Starting a Business)	(2) Time in days (Starting a Business)	(3) No of procedures (Dealing with construction permits)	(4) No of procedures (Registering property)	(5) Time in days (Enforcing Contracts)
Subnat Tax as % of Tot Tax % of Tot Tax	0.3523 (1.281)	-16.6056 (12.661)	7.6137 (7.034)	0.7687 (1.078)	50.1960 (49.608)
GDP per capita constant 2000 USD	0.0002 (0.000)	0.0012 (0.001)	0.0002 (0.000)	0.0001 (0.000)	0.0021 (0.002)
Manufacturing Value added % of GDP	-0.0009 (0.079)	-0.0606 (0.598)	0.0348 (0.077)	0.0283 (0.038)	-2.7722** (1.148)
GDP per person employed (constant 1990 PPP \$)	-0.0001* (0.000)	0.0001 (0.001)	-0.0004 (0.000)	-0.0002*** (0.000)	-0.0061*** (0.001)
Labor participation rate % of tot population ages 15+	0.0082 (0.094)	0.0926 (0.992)	-0.0013 (0.098)	-0.1368** (0.057)	-4.3596*** (1.603)
Market capitalization of listed co's % of GDP	-0.0057** (0.003)	-0.0625** (0.026)	0.0010 (0.002)	0.0011 (0.002)	-0.0558 (0.041)
Transitional Countries	5.6311 (5.732)	69.3343 (67.639)	0.1356 (4.541)	-5.4868* (3.136)	-207.9899* (111.908)
Developing Countries	6.0992 (4.311)	84.3727 (51.632)	3.2936 (4.604)	-4.5679 (2.891)	123.7253 (84.854)
Constant	8.3669 (10.074)	-26.5662 (87.372)	30.2092** (13.970)	21.2863*** (6.265)	919.0133*** (159.718)
Observations	275	275	185	230	254
R-squared	0.923	0.817	0.992	0.958	0.991

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 7  
The Effect of Expenditure Decentralization on Business Environment

VARIABLES	(1) start-up procedures to register a business (number)	(2) Tax payments (number)	(3) Time required to start a business (days)	(4) Time to prepare and pay taxes (hours)	(5) Time to resolve insolvency (years)
Subnat Expd % of Tot Expd % of Tot Expd	-3.7369 (2.584)	59.3013*** (7.157)	-6.3614 (8.343)	194.3595* (117.088)	0.1251 (0.191)
GDP per capita constant 2000 USD	0.0004*** (0.000)	-0.0002 (0.000)	0.0022** (0.001)	-0.0020 (0.016)	-0.0000 (0.000)
Manufacturing Value added % of GDP	-0.0443 (0.069)	-0.5159** (0.213)	-0.2555 (0.566)	23.6035 (18.772)	0.0442*** (0.017)
GDP per person employed (constant 1990 PPP \$)	-0.0002*** (0.000)	-0.0007* (0.000)	-0.0001 (0.001)	-0.0011 (0.007)	0.0000 (0.000)
Labor participation rate % of tot population ages 15+	0.0396 (0.106)	-0.9388* (0.497)	-0.7926 (0.904)	-1.6397 (3.845)	0.0273** (0.013)
Market capitalization of listed co's % of GDP	-0.0112*** (0.004)	0.0060 (0.010)	-0.0514** (0.026)	0.2381 (0.370)	0.0004 (0.000)
Transitional Countries	7.3368* (4.287)	26.8594** (10.622)	68.1172* (40.357)	471.9536 (307.804)	2.1656* (1.154)
Developing Countries	8.9016*** (2.992)	-13.5279 (11.781)	66.0228** (29.650)	-37.7986 (295.773)	1.5082* (0.781)
Constant	7.4621 (8.617)	99.6127** (39.224)	29.8646 (72.028)	-37.4422 (469.599)	-2.0291 (1.786)
Observations	302	215	302	215	301
R-squared	0.900	0.990	0.791	0.880	0.982

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 8  
The Effect of Expenditure Decentralization on Business Environment

VARIABLES	(1) No of Procedures (Starting a Business)	(2) Time in days (Starting a Business)	(3) No of procedures (Dealing with construction permits)	(4) No of procedures (Registering property)	(5) Time in days (Enforcing Contracts)
Subnat Expd % of Tot Expd % of Tot Expd	-2.1379 (1.463)	-21.5537*** (7.364)	8.8007 (6.646)	0.6409 (0.912)	85.9637 (52.444)
GDP per capita constant 2000 USD	0.0003* (0.000)	0.0013 (0.001)	0.0003 (0.000)	0.0001 (0.000)	0.0022 (0.002)
Manufacturing Value added % of GDP	0.0075 (0.082)	0.0818 (0.627)	0.0419 (0.074)	0.0264 (0.041)	-3.2887*** (1.216)
GDP per person employed (constant 1990 PPP \$)	-0.0002* (0.000)	0.0001 (0.001)	-0.0004 (0.000)	-0.0002** (0.000)	-0.0063*** (0.001)
Labor participation rate % of tot population ages 15+	0.0345 (0.092)	0.1587 (0.985)	0.0660 (0.085)	-0.1311** (0.056)	-4.1265*** (1.567)
Market capitalization of listed co's % of GDP	-0.0069** (0.003)	-0.0548* (0.029)	-0.0015 (0.003)	0.0009 (0.002)	-0.0879* (0.045)
Transitional Countries	6.5630 (4.660)	55.3683 (54.353)	0.6875 (3.799)	-1.4425 (2.341)	-253.6339*** (87.076)
Developing Countries	7.1500** (3.237)	70.9863* (37.978)	3.9479 (3.959)	-0.5211 (2.069)	69.9009 (61.542)
Constant	6.5783 (9.038)	-18.2736 (79.152)	26.9609** (12.970)	17.1696*** (5.580)	957.5176*** (144.410)
Observations	255	255	170	212	234
R-squared	0.919	0.814	0.992	0.955	0.991

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 9  
The Effect of Tax Decentralization on Business Environment  
(Panel with Fixed Effects)

VARIABLES	(1) start-up procedures to register a business (number)	(2) Tax payments (number)	(3) Time required to start a business (days)	(4) Time to prepare and pay taxes (hours)	(5) Time to resolve insolvency (years)
Subnat Tax as % of Tot Tax % of Tot Tax	0.3585 (1.330)	39.9834*** (4.864)	-8.0165 (12.848)	121.1325 (142.677)	0.5634** (0.252)
GDP per capita constant 2000 USD	0.0003** (0.000)	0.0006 (0.001)	0.0003 (0.001)	0.0018 (0.016)	-0.0001** (0.000)
Manufacturing Value added % of GDP	0.1798*** (0.058)	0.1073 (0.246)	1.5034*** (0.559)	24.7006*** (7.204)	0.0455*** (0.011)
GDP per person employed (constant 1990 PPP \$)	-0.0004*** (0.000)	-0.0010*** (0.000)	-0.0022*** (0.001)	-0.0079 (0.010)	0.0000 (0.000)
Labor participation rate % of tot population ages 15+	-0.1232* (0.073)	-1.0746*** (0.333)	-2.1494*** (0.701)	-2.4478 (9.759)	0.0187 (0.014)
Market capitalization of listed co's % of GDP	-0.0013 (0.003)	0.0178** (0.009)	-0.0325 (0.026)	0.4275 (0.264)	0.0000 (0.001)
Constant	19.9058*** (5.055)	100.7636*** (22.702)	197.5807*** (48.845)	203.2190 (665.908)	0.4311 (0.956)
Observations	324	233	324	233	323
R-squared	0.229	0.362	0.183	0.105	0.102
Number of countriname1	55	54	55	54	55

Standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 10  
The Effect of Tax Decentralization on Business Environment  
(Panel with Fixed Effects)

VARIABLES	(1) No of Procedures (Starting a Business)	(2) Time in days (Starting a Business)	(3) No of procedures (Dealing with construction permits)	(4) No of procedures (Registering property)	(5) Time in days (Enforcing Contracts)
Subnat Tax as % of Tot Tax % of Tot Tax	0.9070 (1.281)	-8.1571 (14.060)	6.8648** (2.726)	0.5464 (0.673)	46.9278 (33.064)
GDP per capita constant 2000 USD	0.0002 (0.000)	-0.0006 (0.001)	0.0003* (0.000)	0.0001* (0.000)	0.0042* (0.002)
Manufacturing Value added % of GDP	0.2258*** (0.058)	2.0641*** (0.633)	0.0876 (0.081)	0.0441 (0.034)	-1.3766 (0.949)
GDP per person employed (constant 1990 PPP \$)	-0.0003*** (0.000)	-0.0019** (0.001)	-0.0004*** (0.000)	-0.0002*** (0.000)	-0.0062*** (0.001)
Labor participation rate % of tot population ages 15+	-0.1169 (0.077)	-1.4061* (0.844)	0.0058 (0.129)	-0.1232*** (0.046)	-4.8548*** (1.246)
Market capitalization of listed co's % of GDP	-0.0004 (0.002)	-0.0170 (0.027)	0.0002 (0.003)	-0.0004 (0.001)	0.0130 (0.040)
Constant	16.3918*** (5.261)	148.2695** (57.757)	22.9350*** (8.585)	14.9716*** (3.148)	893.6553*** (86.079)
Observations	275	275	185	230	254
R-squared	0.195	0.155	0.122	0.126	0.188
Number of countriname1	54	54	53	53	50

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 11  
The Effect of Expenditure Decentralization on Business Environment  
(Panel with Fixed Effects)

VARIABLES	(1) start-up procedures to register a business (number)	(2) Tax payments (number)	(3) Time required to start a business (days)	(4) Time to prepare and pay taxes (hours)	(5) Time to resolve insolvency (years)
Subnat Expd % of Tot Expd % of Tot Expd	-4.0265** (1.760)	61.7305*** (6.035)	-14.4775 (17.235)	212.2753 (201.523)	0.1212 (0.335)
GDP per capita constant 2000 USD	0.0003** (0.000)	0.0001 (0.001)	0.0000 (0.001)	-0.0016 (0.017)	-0.0001** (0.000)
Manufacturing Value added % of GDP	0.2000*** (0.061)	0.0266 (0.229)	1.5772*** (0.596)	26.4933*** (7.639)	0.0482*** (0.012)
GDP per person employed (constant 1990 PPP \$)	-0.0004*** (0.000)	-0.0008** (0.000)	-0.0022*** (0.001)	-0.0022 (0.010)	0.0000 (0.000)
Labor participation rate % of tot population ages 15+	-0.1148 (0.074)	-1.1092*** (0.296)	-2.1106*** (0.724)	-2.9139 (9.893)	0.0191 (0.014)
Market capitalization of listed co's % of GDP	-0.0009 (0.003)	0.0121 (0.009)	-0.0274 (0.028)	0.3839 (0.285)	0.0002 (0.001)
Constant	20.7481*** (5.156)	96.6894*** (20.393)	198.4659*** (50.483)	41.0372 (680.926)	0.4984 (0.981)
Observations	302	215	302	215	301
R-squared	0.256	0.462	0.190	0.107	0.095
Number of countriname1	51	50	51	50	51

Standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 12  
The Effect of Expenditure Decentralization on Business Environment  
(Panel with Fixed Effects)

VARIABLES	(1) No of Procedures (Starting a Business)	(2) Time in days (Starting a Business)	(3) No of procedures (Dealing with construction permits)	(4) No of procedures (Registering property)	(5) Time in days (Enforcing Contracts)
Subnat Expd % of Tot Expd % of Tot Expd	-1.3888 (1.757)	-14.0825 (19.547)	8.4078 (6.197)	0.5795 (0.978)	73.7924 (54.097)
GDP per capita constant 2000 USD	0.0002 (0.000)	-0.0008 (0.002)	0.0004* (0.000)	0.0001* (0.000)	0.0037 (0.002)
Manufacturing Value added % of GDP	0.2430*** (0.061)	2.1797*** (0.680)	0.1054 (0.089)	0.0467 (0.037)	-1.6912 (1.035)
GDP per person employed (constant 1990 PPP \$)	-0.0003*** (0.000)	-0.0018** (0.001)	-0.0005*** (0.000)	-0.0002*** (0.000)	-0.0066*** (0.001)
Labor participation rate % of tot population ages 15+	-0.1048 (0.079)	-1.3890 (0.875)	0.0507 (0.135)	-0.1202** (0.048)	-4.8456*** (1.297)
Market capitalization of listed co's % of GDP	-0.0006 (0.003)	-0.0122 (0.029)	-0.0002 (0.003)	-0.0004 (0.001)	0.0060 (0.044)
Constant	16.2636*** (5.403)	145.8587** (60.118)	21.8215** (9.170)	14.9784*** (3.311)	907.8551*** (90.191)
Observations	255	255	170	212	234
R-squared	0.206	0.159	0.109	0.129	0.195
Number of countryname1	50	50	49	49	46

Standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 13  
The Effect of Tax Decentralization on Business Environment  
(IV Estimation)

VARIABLES	(1) start-up procedures to register a business (number)	(2) Tax payments (number)	(3) Time required to start a business (days)	(4) Time to prepare and pay taxes (hours)	(5) Time to resolve insolvency (years)
Subnat Tax as % of Tot Tax % of Tot Tax	4.4453** (1.942)	-34.6813 (23.249)	8.8500 (11.353)	298.5979 (221.655)	0.6207 (1.522)
GDP per capita constant 2000 USD	-0.0000 (0.000)	0.0010*** (0.000)	-0.0001 (0.000)	-0.0009 (0.002)	0.0000 (0.000)
Manufacturing Value added % of GDP	0.0403 (0.027)	0.2647 (0.216)	0.4994*** (0.175)	-0.6384 (2.247)	-0.0060 (0.012)
GDP per person employed (constant 1990 PPP \$)	-0.0001*** (0.000)	-0.0017*** (0.000)	-0.0002 (0.000)	-0.0097*** (0.004)	-0.0000** (0.000)
Labor participation rate % of tot population ages 15+	-0.0040 (0.022)	-0.0899 (0.215)	0.0138 (0.182)	2.2424 (1.721)	-0.0337*** (0.013)
Market capitalization of listed co's % of GDP	-0.0081*** (0.002)	-0.0536** (0.022)	-0.0624*** (0.016)	-0.4063* (0.246)	0.0004 (0.002)
Transitional Countries	-0.4106 (0.674)	-5.2506 (7.280)	-3.8719 (7.393)	-18.5131 (57.970)	1.0407*** (0.205)
Developing Countries	1.2062 (0.819)	-21.9095* (11.723)	11.8516 (8.307)	-105.7828 (121.206)	1.6674*** (0.381)
Constant	403.2908*** (136.020)	4,321.2479* (2,230.836)	5,693.5283*** (1,084.614)	39,535.6153* (22,017.189)	94.7652 (63.610)
Observations	312	225	312	225	311
R-squared	0.421	0.283	0.340	0.312	0.361
“First Stage F Test”	48.65	37.36	48.65	37.36	47.96
“Underid Test P-value”	0.0000	0.0000	0.0000	0.0000	0.0000
“Weakid Test stat”	48.71	37.92	48.71	37.92	48.13
“Hansen J P-value”	0.208	0.169	0.0335	0.787	0.118

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 14  
The Effect of Tax Decentralization on Business Environment  
(IV Estimation)

VARIABLES	(1) No of Procedures (Starting a Business)	(2) Time in days (Starting a Business)	(3) No of procedures (Dealing with construction permits)	(4) No of procedures (Registering property)	(5) Time in days (Enforcing Contracts)
Subnat Tax as % of Tot Tax % of Tot Tax	2.9723 (2.038)	4.4294 (12.827)	81.0926*** (18.981)	2.1163* (1.098)	-235.6644** (107.907)
GDP per capita constant 2000 USD	-0.0000 (0.000)	-0.0002 (0.000)	-0.0003 (0.000)	-0.0000 (0.000)	0.0004 (0.001)
Manufacturing Value added % of GDP	0.0507* (0.029)	0.5329** (0.209)	-0.5250*** (0.166)	-0.0818*** (0.021)	2.2945 (1.524)
GDP per person employed (constant 1990 PPP \$)	-0.0001*** (0.000)	-0.0003 (0.000)	0.0001 (0.000)	-0.0000* (0.000)	-0.0042*** (0.001)
Labor participation rate % of tot population ages 15+	-0.0058 (0.023)	0.1017 (0.212)	-0.2112* (0.121)	-0.0970*** (0.018)	-2.6461*** (0.948)
Market capitalization of listed co's % of GDP	-0.0066*** (0.002)	-0.0610*** (0.017)	0.0035 (0.016)	0.0006 (0.002)	-0.0421 (0.120)
Transitional Countries	-0.5652 (0.726)	-5.3711 (8.695)	15.4417** (6.014)	-0.4459 (0.610)	-141.5781*** (42.335)
Developing Countries	0.2398 (0.905)	9.1650 (9.818)	16.3613** (7.748)	-0.5114 (0.729)	-19.2259 (46.932)
Constant	383.4734** (164.293)	6,653.6441*** (1,439.323)	-461.6242 (1,588.746)	101.9016 (182.905)	4,473.4645 (8,770.965)
Observations	265	265	179	222	250
R-squared	0.428	0.330	-0.394	0.272	0.261
“First Stage F Test”	42.94	42.94	29	35.96	37.15
“Underid Test P-value”	0.0000	0.0000	0.0000	0.0000	0.0000
“Weakid Test stat”	43.23	43.23	28.97	36.63	37.38
“Hansen J P-value”	0.367	0.0452	0.114	0.727	0.0964

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 15  
The Effect of Expenditure Decentralization on Business Environment  
(IV Estimation)

VARIABLES	(1) start-up procedures to register a business (number)	(2) Tax payments (number)	(3) Time required to start a business (days)	(4) Time to prepare and pay taxes (hours)	(5) Time to resolve insolvency (years)
Subnat Expd % of Tot Expd % of Tot Expd	1.1730 (2.220)	-32.5682 (22.165)	16.5027 (12.484)	-81.3968 (207.100)	1.1326 (1.908)
GDP per capita constant 2000 USD	-0.0000 (0.000)	0.0011*** (0.000)	-0.0002 (0.000)	-0.0024 (0.002)	0.0000** (0.000)
Manufacturing Value added % of GDP	0.0218 (0.029)	0.6201*** (0.232)	0.3283* (0.192)	-1.0217 (2.417)	0.0016 (0.012)
GDP per person employed (constant 1990 PPP \$)	-0.0001*** (0.000)	-0.0020*** (0.000)	-0.0000 (0.000)	-0.0116*** (0.004)	-0.0000*** (0.000)
Labor participation rate % of tot population ages 15+	-0.0126 (0.024)	0.0105 (0.230)	-0.0533 (0.199)	2.7496 (1.710)	-0.0393** (0.017)
Market capitalization of listed co's % of GDP	-0.0103*** (0.003)	-0.0248 (0.027)	-0.0815*** (0.022)	-0.3439 (0.332)	-0.0004 (0.003)
Transitional Countries	-1.1169 (0.749)	-10.1782 (8.405)	-0.3450 (7.847)	-116.2565 (70.736)	1.0855*** (0.283)
Developing Countries	0.3967 (0.931)	-29.0138** (12.565)	17.3455** (8.812)	-235.4185* (136.699)	1.6470*** (0.508)
Constant	542.8518*** (139.298)	3,397.2688 (2,241.883)	6,414.9054*** (1,167.148)	44,436.3431** (21,675.923)	64.6468 (68.697)
Observations	290	207	290	207	289
R-squared	0.419	0.349	0.348	0.313	0.349
“First Stage F Test”	52.95	54.13	52.95	54.13	51.70
“Underid Test P-value”	0.0000	0.0000	0.0000	0.0000	0.0000
“Weakid Test stat”	53.83	54.60	53.83	54.60	52.74
“Hansen J P-value”	0.206	0.0269	0.0615	0.562	0.0874

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 16  
The Effect of Expenditure Decentralization on Business Environment  
(IV Estimation)

VARIABLES	(1) No of Procedures (Starting a Business)	(2) Time in days (Starting a Business)	(3) No of procedures (Dealing with construction permits)	(4) No of procedures (Registering property)	(5) Time in days (Enforcing Contracts)
Subnat Expd % of Tot Expd % of Tot Expd	-0.5677 (2.376)	12.7213 (13.893)	75.7745*** (17.409)	1.7940 (1.106)	-245.5435** (106.076)
GDP per capita constant 2000 USD	-0.0000 (0.000)	-0.0002 (0.000)	0.0001 (0.000)	-0.0000 (0.000)	-0.0003 (0.002)
Manufacturing Value added % of GDP	0.0343 (0.032)	0.4021* (0.232)	-0.4645*** (0.141)	-0.0721*** (0.026)	2.1817 (1.667)
GDP per person employed (constant 1990 PPP \$)	-0.0001*** (0.000)	-0.0001 (0.000)	-0.0000 (0.000)	-0.0000* (0.000)	-0.0043*** (0.001)
Labor participation rate % of tot population ages 15+	-0.0042 (0.026)	0.0523 (0.237)	-0.3853*** (0.137)	-0.0908*** (0.021)	-2.3831** (1.100)
Market capitalization of listed co's % of GDP	-0.0068** (0.003)	-0.0748*** (0.023)	-0.0565** (0.024)	0.0000 (0.003)	0.1397 (0.152)
Transitional Countries	-1.4902* (0.822)	-1.7989 (9.390)	20.1897*** (6.408)	-0.4914 (0.688)	-160.0720*** (51.289)
Developing Countries	-0.8389 (1.035)	14.6377 (10.612)	18.2799** (7.544)	-0.7473 (0.854)	-30.9448 (55.481)
Constant	505.8351*** (168.536)	7,328.3965*** (1,547.521)	1,190.5058 (1,520.595)	125.5106 (197.023)	2,334.4669 (9,446.098)
Observations	245	245	164	204	230
R-squared	0.419	0.329	-0.130	0.233	0.243
“First Stage F Test”	51.16	51.16	47.30	52.20	45.36
“Underid Test P-value”	0.0000	0.0000	0.0000	0.0000	0.0000
“Weakid Test stat”	52.23	52.23	46.47	53.13	45.73
“Hansen J P-value”	0.264	0.0614	0.0135	0.989	0.136

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**SALLY WALLACE**  
**PUBLIC ECONOMICS**

COURSE OBJECTIVES

Public Economics examines government tax and spending policies: what does government do, what are the effects of these actions, and are these effects “good” or “bad”. This course will focus on a theoretical and empirical analysis of the burden of public funding decisions. In particular, we will study the theory of taxation, incidence, equity, and investigate the behavior of firms and individuals. We will also analyze the empirical burden of taxation by studying the case of Pakistan. Using theoretical, empirical, and experimental tools, the course *describes* the major taxes used around the world; it *analyzes* the impacts of taxation on the allocation of resources, the distribution of economic welfare, and the level of tax revenues; and it *evaluates* these impacts.

There are a number of suggested readings for each section. The data and tools for the applied empirical analysis will be provided and the research will be carried out in a computer lab under supervision of the instructor.

The plan for the course is as follows:

Day 1:

Basic review of welfare economics as the paradigm of analysis of the public sector (measuring efficiency)

Overview of tax systems in sample of countries

    Notion of federalism is important

    Economic theory also plays an important role

Lab session: Introduction to micro data

    Descriptive statistics analysis

    Sampling

    Outlier analysis

    Analysis of distributions

Day 2:

Equity and Incidence of taxation

The incidence of taxation

    Partial equilibrium framework

    General equilibrium framework (using Harberger analysis)

Lab session: Incorporating payroll taxes, individual income tax, and corporate income tax

    Coding tax code

    Looking for evaders

    “Tying” to national totals

Readings:

- McLure, Charles E. (1975), "General Equilibrium Incidence Analysis", Journal of Public Economics, 4, 125-161.
- Harberger, Arnold C. (1962), "The Incidence of the Corporation Income Tax," Journal of Political Economy, 70, 215-240.

Day 3:

- Finalize general equilibrium incidence analysis  
Measures of excess burden and efficiency  
Implications for distribution (equity) of tax system
- Introduce "optimal" taxation
- Lab session: How to deal with evasion in the model  
Analysis of distribution  
National aggregates  
Incorporating additional micro data

Readings:

- Auerbach, Alan J. (1985), "The Theory of Excess Burden and Optimal Taxation," Chapter 2 in Handbook of Public Economics Volume I, Alan J. Auerbach and Martin S. Feldstein, eds. (New York, NY: North-Holland).
- Browning, Edgar (1976), "The Marginal Cost of Public Funds," Journal of Political Economy, 84 (2), 283-298.

Day 4:

- Finalize optimal taxation  
Revenue maximization problem  
Specific incentive problems:  
Financing/debt  
Labor supply
- Lab session: Imputing the burden assumptions based on incidence analysis  
Running the model  
What other taxes to bring into the model?

Readings:

- Fullerton, Don (1982), "On the Possibility of an Inverse Relationship Between Tax Rates and Tax Revenues," Journal of Public Economics, 19, 3-22.
- Bird, Richard and Sally Wallace (2005), "Revenue Maximizing Tax Rates," in Encyclopedia of Taxation, Urban Institute, 2005.
- Haughton, Jonathan (1998), "Calculating the Revenue Maximizing Excise Tax Rate," Eager Project Discussion Paper #13: <http://www.eagerproject.com/>
- Sandmo, Agnar (1976), "Optimal Taxation: An Introduction to the Literature," Journal of Public Economics, July/August 1976, p. 37-54.
- Samwick, Andrew (1998), "Portfolio Responses to Taxation," in The Economic Consequences of

Taxing the Rich, Joel Slemrod, ed. (New York, NY: Cambridge University Press).  
Zodrow, George R. (1991), "On the 'Traditional' and 'New' Views of Dividend Taxation,"  
National Tax Journal, 44 (4), 497-509.

Day 5:

Taxes on consumption vs. savings

Taxes on wealth

Worldwide experience

Incentive effects

Design?

Lab session: Policy options

What choices to be made

Pre-post analysis of taxpayers

“Winners and losers”

General sources:

Some info on taxes around the globe:

<http://unpan1.un.org/intradoc/groups/public/documents/UN/UNPAN005543.pdf>

[http://www.oecdobserver.org/news/fullstory.php/aid/651/The\\_truth\\_about\\_tax\\_burdens.html](http://www.oecdobserver.org/news/fullstory.php/aid/651/The_truth_about_tax_burdens.html)

[http://epp.eurostat.ec.europa.eu/cache/ITY\\_OFFPUB/KS-SF-07-031/EN/KS-SF-07-031-EN.PDF](http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-SF-07-031/EN/KS-SF-07-031-EN.PDF)

**Cairo University, January 22–26, 2012**

**Introduction to Financial Econometrics**

**Instructor:** Richard Luger (Georgia State University)

This five-day course provides an introduction to financial econometrics. It is designed for those who want to learn about the theoretical background and implementation details of some of the main tools used in the analysis of financial markets data. Each day will be divided in two parts: one for the theory and another for the applications. The applied work will make use of the open-source R programming language, which is freely available at [www.r-project.org](http://www.r-project.org). Most of the covered methods are also available in other environments, such as EViews and Stata. So after this introduction (in R) you will be well positioned to continue reading the financial econometrics literature and doing applied work in the environment of your choice.

**Day 1**

1. **Financial time series and their characteristics:** Asset return calculations; distributional properties of returns; behavior of returns; the random walk model; the efficient market hypothesis.
2. **Introduction to R:** Getting started; basic syntax and operations; input and output in R; getting data from Yahoo!Finance; graphical facilities.

**Day 2**

3. **Time series models:** Stationary processes; autoregressive models; moving average models; ARMA and ARIMA models; information criteria for model selection; forecasting.
4. **ARIMA models in R:** Installing R packages; linear regression; ARIMA analysis; conditional mean forecasting.

**Day 3**

5. **Volatility modeling:** J.P. Morgan's RiskMetrics EWMA model; ARCH, GARCH, and integrated GARCH models; maximum likelihood estimation and inference.
6. **GARCH models in R:** Testing for ARCH/GARCH effects; simulating GARCH models; estimation of GARCH models; conditional variance forecasting; variance targeting.

**Day 4**

7. **More volatility modeling:** GARCH-in-mean; Student-t GARCH; exponential GARCH model; asymmetric GARCH models; Quasi-maximum likelihood estimation.
8. **Practical issues:** Positivity and stationarity constraints; choice of initial values; numerical optimization methods; model selection.

**Day 5**

9. **Correlation modeling:** Multivariate RiskMetrics EWMA model of covariances; constant conditional correlation model; dynamic conditional correlation model.
10. **DCC models in R:** Simulation; filtering and two-step estimation; correlation targeting.

Proposed Agenda – Macro-Economic Policies and Growth in Egypt Seminar and meetings:

Andrew Feltenstein and Jeff Condon, Cairo University Jan 2012

Day and proposed time	Items
15/01/2012	-car to await guests on the airport according to time arrival
16/01/2012 from 9.00 am to 5.00 pm	-Escort to Cairo University : <b>Meetings:</b> Vise Dean of the University Dean of the Faculty of Economics & Political Science (FEPS) Head of Economic Department , FEPS -Discussion of the paper @ Manal's office -Lunch : 3.00pm -4.00 pm (with CU faculty )
17/01/2012 From 10.00 am to 3.00pm	-Escort to FEPS -Seminar : 12.00pm- 2.00 pm -Lunch : 2.30pm -3.30pm (CU faculty )
18/01/2012 since 9.00am	<b>Pyramids tour included</b> 1-Transportation with guide all the day 2- Pyramids ticket 3-visit 3 of the Pyramids 4-visit inside one of the Pyramids 6- Visit some of the pharaonic tombs 7-Visit the Sphinx <b>Visit the Citadel of Saladin</b> <b>At 7.30 pm till 10.00pm</b> -dinner
19/01/2012	-A car will wait guests at hotel

Cairo University  
Faculty of Economics and Political Science  
Experiment Flyer

You are invited, as a student at Cairo University, to participate in a research study. The purpose of the study is to explore the effects of institutions on individual decision-making. A total of 240 participants will be recruited for this study. The experiment will take place in mid March 2013. Participation will require approximately 2 hours of your time.

If you decide to participate, you will be asked to make a series of choices. No one (including the researchers) will be able to tell which answers are yours. After making all of these choices, you will be asked to complete a survey about you. You will be compensated for your time. Your compensation will depend on the decisions that you make as well as on the decisions of others in your group, as explained in the instructions to be read before the experiment takes place.

If you are interested in participating, please email Sarah Mansour, one of the research team, at [SARAH.MANSOUR@feps.edu.eg](mailto:SARAH.MANSOUR@feps.edu.eg)

Georgia State University  
Department of Economics  
Informed Consent

Title: Tax Experiment

Principal Investigators: Vjollca Sadiraj  
Sally Wallace

Student Principal Investigator: Sarah Mansour

I. Purpose:

You are invited to participate in a research study. The purpose of the study is to investigate how individuals make decisions about tax reporting. You are invited to participate because you are a student at Cairo University. A total of 200 participants will be recruited for this study. Participation will require approximately 2 hours of your time today.

II. Procedures:

If you decide to participate, you will be asked to make a series of choices about income tax reporting on a computer. After making all of these choices, you will be asked to complete a survey about you. You will receive complete instructions about each part in a moment. You will have an opportunity to receive money today based on your decisions and also on chance and on others' decisions. These earnings opportunities will be described to you in the instructions.

III. Risks:

In this study, you will not have any more risks than you would in a normal day of life.

IV. Benefits:

Participation in this study may not benefit you personally. Overall, we hope to gain information about how people make tax reporting decisions in Egypt.

V. Voluntary Participation and Withdrawal:

Participation in research is voluntary. You do not have to be in this study. If you decide to be in the study and change your mind, you have the right to drop out at any time. You may skip questions or stop participating at any time. Whatever you decide, you will not lose any benefits to which you are otherwise entitled.

VI. Confidentiality:

We will keep your records private to the extent allowed by law. The researcher team will have access to the information you provide. Information may also be shared with those who make sure the study is done correctly (GSU Institutional Review Board, the U.S. Office for Human Research Protection). However,

no one (including the researchers) will be able to tell which answers are yours. Your answers will be stored using a subject ID number only. This ID number will be used to link your choices with your survey, but there will never be any key linking this ID number to you personally. Your data may also be shared with other researchers in the future.

The only document with your name on it will be this consent form. There is no way to link this consent form to your subject ID number. Also, it will be stored separately from your data. Your name and other facts that might point to you will not appear when we present this study or publish its results. The findings will be summarized and reported in group form. You will not be identified personally.

VII. Contact Persons:

Contact Sally Wallace at 404-413-0046 or [swallace@gsu.edu](mailto:swallace@gsu.edu) if you have questions, concerns, or complaints about this study. You can also call if think you have been harmed by the study. Call Susan Vogtner in the Georgia State University Office of Research Integrity at 404-413-3513 or [svogtner1@gsu.edu](mailto:svogtner1@gsu.edu) if you want to talk to someone who is not part of the study team. You can talk about questions, concerns, or suggestions about the study. You can also call Susan Vogtner if you have questions or concerns about your rights in this study.

VIII. Copy of Consent Form to Subject:

We will give you a copy of this consent form to keep.

If you are willing to volunteer for this research, please sign below.

\_\_\_\_\_  
Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Principal Investigator or Researcher Obtaining Consent

\_\_\_\_\_  
Date

## **Subject Instructions for the Baseline (High PG)**

Welcome and thank you for participating in today's experiment.

### **I. Introduction**

This is an experiment in the economics of group decision making. Your earnings will be determined by your own decisions and the decisions of others as described in the following instructions. **SO, IT IS IMPORTANT THAT YOU READ THESE INSTRUCTIONS CAREFULLY.**

This experiment is structured so that only you know your earnings. All of the money that you earn will be paid to you privately in cash immediately at the end of today's experiment. Various research agencies have provided the funds for the conduct of this research study.

*If you have any questions, RAISE YOUR HAND and an experimenter will come up to you to answer questions in private. Please feel free to ask as many questions as you like.*

### **Time**

This experiment will last approximately two hours.

### **Scenario**

In this experiment, you will be a member of a group of 5 individuals. You will be randomly assigned to a group and will remain in the same group for the entire experimental session.

Every group has an official who is selected randomly from among your group members by the computer at the beginning of the experiment (before period 1) and in the middle (before period 8) of the experiment. There are 14 decision periods in this experiment.

### **Anonymity**

You will not know the rest of your group members, neither will they know you.

### **II. Monetary payoff**

You earn money in Experimental Pounds (EP) in each decision period. This amount will be displayed on your computer screen at the completion of the decision period. At the end of today's experiment, your total accumulated earnings in experimental pounds divided by the number of periods will be converted into Egyptian pounds at the below mentioned conversion rate. The more experimental pounds you earn, the more Egyptian pounds you will be paid.

1 Experimental Pounds = 10 Egyptian Pounds

The following section explains how to earn money in each decision period.

### III. Task and decision making process

In this experiment, you will go through the below mentioned sequence of events in each of 14 decision periods.

#### *Event I*

All subjects are given a simple task to find the spelling mistakes in a piece of text on the computer. You will be given 2 minutes to conduct the task. You can make corrections to the text by using your mouse to place your cursor in the correct area and make the correction. Use the mouse to move you to other parts of the text. You will earn 2 Experimental Pounds for each mistake that you correct accurately. There are 10 errors. This income will be displayed on your screen at the completion of the task.

#### *Event II*

Your earned income is what you earn in Event I. You will make the choice of how much of this earned income to report using the sliding scale on your screen. There is an income tax at 25% that you need to pay on the income you report. This tax rate is the same for all individuals belonging to the same group. As you move the slide to determine how much income you will report, you can see the consequences of your choice in terms of your net income if you are audited or not.

You can choose to report none of it, part of it or all of it. Consequently your reported tax liability is equal to:

$$25\% * \text{Reported Income}$$

#### *Event III*

Once you choose the level of income you will report, a random audit will be performed. One subject out of five in the group will be chosen for audit so the likelihood of a subject being audited is 20%. If you are chosen for the random audit, your earned income will be disclosed to the official. If the audited individual's reported income in Event II is less than the earned income in Event I, then the individual pays, in addition to the tax of 25% of the *earned* income, a tax penalty that increases in the difference between the earned income and reported income as in the table that has been handed out.

You pay a tax penalty only if you are audited and if your reported income is less than the earned income.

#### *Event IV*

Income taxes in this experiment will be used to fund a public project that is valuable (in terms of experimental pounds) to you and your group members.

Each experimental pound (EP) that goes in the public fund is tripled. Therefore,

$$\text{Public fund} = 3 * \text{Income taxes collected from all the members in your group}$$

(Note: Tax penalty is not added to the public fund)

There are two types of public projects available in this experiment, Type C and Type G. The choice of which project is made available to you and your group is randomly selected by the computer:

- Type C good is funded with probability 0.9 whereas type G is funded with probability 0.1. The benefits of Type C good are shared equally among all 5 members of the group.
- The benefits of Type G good accrue 50% to the official with the remainder split among the other four group members.

The type of good that is chosen will be highlighted in GREEN on your screen.

**Earnings if public project of Type C is funded.** Public project earnings of:

- the official = Public fund / 5
- of each other member = Public fund / 5

**Earnings if public project of Type G is funded.** Public project earnings of:

- the official = Public fund / 2
- of each other member = Public fund / 8

For example, if

Income taxes collected by the government in your group = 20 EP

Public fund =  $3 \times 20 = 60$  EP

Earnings from public project of Type C:

When this project is chosen, then all the group members earn equal amount and the money in public fund is equally divided between all the group members.

Public project earnings =  $60 / 5 = 12$  EP

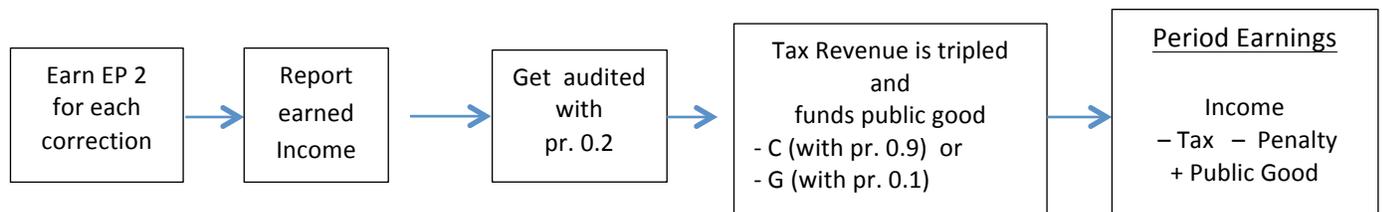
Earnings from public project of Type G:

When this project is chosen, then the official will earn more than the rest of the group members: Half of the total amount of money in public fund is given to the official; the remaining half of the public fund is equally divided among all four remaining group members.

Public project earning of the official =  $60 / 2 = 30$  EP

Public project earnings of each other group members =  $60 / 8 = 7.5$  EP

The following diagram illustrates the sequence of events in every period



Section IV below shows your total earnings or payoff in each decision period resulting from Events I to IV explained above.

#### **IV. Earnings in each decision period**

##### Scenario I: If you are not audited

**Total earnings** = Earned Income – tax liability + public project earnings

(Note: As explained above, public project earnings depend on the type of public project provided to the group by the computer)

##### Scenario II: If you are audited

**Total earnings** = Earned Income – tax liability – tax penalty + public project earnings

(Note: Tax penalty is equal to zero if your reported income is equal to your earned income)

(Also as explained above, public project earnings depend on the type of project provided to the group by the computer)

**Final earnings at the end of the experiment** = (Total earnings in 14 rounds)/14

#### **V. Questionnaire and payment**

At the end of today's experiment, you will complete a brief on-line questionnaire, receive payment of your earnings, and then the experiment is over. Information about your decisions will be kept without identifying information so no one can link you as an individual to the decisions that you make.

## Subject Instructions for the Baseline (Low PG)

Welcome and thank you for participating in today's experiment.

### I. Introduction

This is an experiment in the economics of group decision making. Your earnings will be determined by your own decisions and the decisions of others as described in the following instructions. **SO, IT IS IMPORTANT THAT YOU READ THESE INTRUCTIONS CAREFULLY.**

This experiment is structured so that only you know your earnings. All of the money that you earn will be paid to you privately in cash immediately at the end of today's experiment. Various research agencies have provided the funds for the conduct of this research study.

*If you have any questions, RAISE YOUR HAND and an experimenter will come up to you to answer questions in private. Please feel free to ask as many questions as you like.*

### Time

This experiment will last approximately 2 hours.

### Scenario

In this experiment, you will be a member of a group of 5 individuals. You will be randomly assigned to a group and will remain in the same group for the entire experimental session.

Every group has an official who is selected randomly from among your group members by the computer at the beginning of the experiment (before period 1) and in the middle (before period 8) of the experiment. There are 14 decision periods in this experiment.

### Anonymity

You will not know the rest of your group members, neither will they know you.

### II. Monetary payoff

You earn money in Experimental Pounds (EP) in each decision period. This amount will be displayed on your computer screen at the completion of the decision period. At the end of today's experiment, your total accumulated earnings in experimental pounds divided by the number of periods will be converted into Egyptian pounds at the below mentioned conversion rate. The more experimental pounds you earn, the more Egyptian pounds you will be paid.

1 Experimental Pound = 10 Egyptian Pounds

The following section explains how to earn money in each decision period.

### III. Task and decision making process

In this experiment, you will go through the below mentioned sequence of events in each of 14 decision periods.

#### *Event I*

All subjects are given a simple task to find the spelling mistakes in a piece of text on the computer. You will be given 2 minutes to conduct the task. You can make corrections to the text by using your mouse to place your cursor in the correct area and make the correction. Use the mouse to move you to other parts of the text. You will earn 2 Experimental Pounds for each mistake that you correct accurately. There are 10 errors. This income will be displayed on your screen at the completion of the task.

#### *Event II*

Your earned income is what you earn in Event I. You will make the choice of how much of this earned income to report using the sliding scale on your screen. There is an income tax at 25% that you need to pay on the income you report. This tax rate is the same for all individuals belonging to the same group. As you move the slide to determine how much income you will report, you can see the consequences of your choice in terms of your net income if you are audited or not.

You can choose to report none of it, part of it or all of it. Consequently your reported tax liability is equal to:

$$25\% * \text{Reported Income}$$

#### *Event III*

Once you choose the level of income you will report, a random audit will be performed. One subject out of five in the group will be chosen for audit so the likelihood of a subject being audited is 20%. If you are chosen for the random audit, your earned income will be disclosed to the official. If the audited individual's reported income in Event II is less than the earned income in Event I, then the individual pays, in addition to the tax of 25% of the earned income, a tax penalty that increases in the difference between the earned income and reported income as in the table that has been handed out.

You pay a tax penalty only if you are audited and if your reported income is less than the earned income.

#### *Event IV*

Income taxes in this experiment will be used to fund a public project that is valuable (in terms of experimental pounds) to you and your group members.

Each experimental pound (EP) that goes in the public fund is tripled. Therefore,

**Public fund** = 3 \* Income taxes collected from all the members in your group  
 (Note: Tax penalty is not added to the public fund)

There are two types of public projects available in this experiment, Type C and Type G. The choice of which project is made available to you and your group is randomly selected by the computer:

- Type C good is funded with probability 0.1 whereas type G is funded with probability 0.9. The benefits of Type C good are shared equally among all 5 members of the group.
- The benefits of Type G good accrue 50% to the official with the remainder split among the other four group members.

The type of good that is chosen will be highlighted in GREEN on your screen.

**Earnings if public project of Type C is funded.** Public project earnings of:

- the official = Public fund / 5
- of each other member = Public fund / 5

**Earnings if public project of Type G is funded.** Public project earnings of:

- the official = Public fund / 2
- of each other member = Public fund / 8

For example, if

Income taxes collected by the government in your group = 20 EP

Public fund = 3\*20 = 60 EP

Earnings from public project of Type C:

When this project is chosen, then all the group members earn equal amount and the money in public fund is equally divided between all the group members.

Public project earnings = 60 / 5 = 12 EP

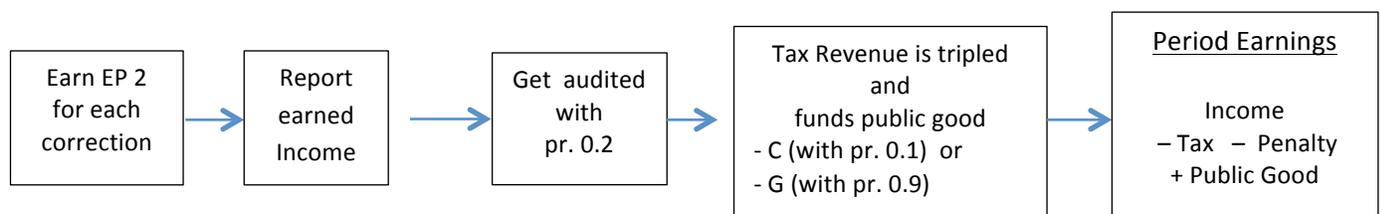
Earnings from public project of Type G:

When this project is chosen, then the official will earn more than the rest of the group members: Half of the total amount of money in public fund is given to the official; the remaining half of the public fund is equally divided among all four remaining group members.

Public project earning of the official = 60/2 = 30 EP

Public project earnings of each other group members = 60/8 = 7.5 EP

The following diagram illustrates the sequence of events in every period



Section IV below shows your total earnings or payoff in each decision period resulting from Events I to IV explained above.

#### **IV. Earnings in each decision period**

##### Scenario I: If you are not audited

**Total earnings** = Earned Income – tax liability + public project earnings

(Note: As explained above, public project earnings depend on the type of public project provided to the group by the computer)

##### Scenario II: If you are audited

**Total earnings** = Earned Income – tax liability – tax penalty + public project earnings

(Note: Tax penalty is equal to zero if your reported income is equal to your earned income)

(Also as explained above, public project earnings depend on the type of project provided to the group by the computer)

**Final earnings at the end of the experiment** = (Total earnings in 14 rounds)/14

#### **V. Questionnaire and payment**

At the end of today's experiment, you will complete a brief on-line questionnaire, receive payment of your earnings, and then the experiment is over. Information about your decisions will be kept without identifying information so no one can link you as an individual to the decisions that you make.

## Subject Instructions for the no election treatment

Welcome and thank you for participating in today's experiment.

### I. Introduction

This is an experiment in the economics of group decision making. Your earnings will be determined by your own decisions and the decisions of others as described in the following instructions. **SO, IT IS IMPORTANT THAT YOU READ THESE INSTRUCTIONS CAREFULLY.**

This experiment is structured so that only you know your earnings. All of the money that you earn will be paid to you privately in cash immediately at the end of today's experiment. Various research agencies have provided the funds for the conduct of this research study.

*If you have any questions, RAISE YOUR HAND and an experimenter will come up to you to answer questions in private. Please feel free to ask as many questions as you like.*

### Time

This experiment will last approximately two hours.

### Scenario

In this experiment, you will be a member of a group of 5 individuals. You will be randomly assigned to a group and will remain in the same group for the entire experimental session.

Every group has an official who is selected randomly from among your group members by the computer at the beginning of the experiment (before period 1) and in the middle (before period 8) of the experiment. There are 14 decision periods in this experiment.

### Anonymity

You will not know the rest of your group members, neither will they know you.

### II. Monetary payoff

You earn money in Experimental Pounds (EP) in each decision period. This amount will be displayed on your computer screen at the completion of the decision period. At the end of today's experiment, your total accumulated earnings in experimental pounds divided by the number of periods will be converted into Egyptian pounds at the below mentioned conversion rate. The more experimental pounds you earn, the more Egyptian pounds you will be paid.

1 Experimental Pound = 10 Egyptian Pounds

The following section explains how to earn money in each decision period.

### **III. Task and decision making process**

In this experiment, you will go through the below mentioned sequence of events in each of 14 decision periods.

#### ***Event I***

All subjects are given a simple task to find the spelling mistakes in a piece of text on the computer. You will be given 2 minutes to conduct the task. You can make corrections to the text by using your mouse to place your cursor in the correct area and make the correction. Use the mouse to move you to other parts of the text. You will earn 2 Experimental Pounds for each mistake that you correct accurately. There are 10 errors. This income will be displayed on your screen at the completion of the task.

#### ***Event II***

Your earned income is what you earn in Event I. You will make the choice of how much of this earned income to report using the sliding scale on your screen. There is an income tax at 25% that you need to pay on the income you report. This tax rate is the same for all individuals belonging to the same group. As you move the slide to determine how much income you will report, you can see the consequences of your choice in terms of your net income if you are audited or not.

You can choose to report none of it, part of it or all of it. Consequently your reported tax liability is equal to:

$$25\% * \text{Reported Income}$$

#### ***Event III***

Once you choose the level of income you will report, a random audit will be performed. One subject out of five in the group will be chosen for audit so the likelihood of a subject being audited is 20%. If you are chosen for the random audit, your earned income will be disclosed to the official. If the audited individual's reported income in Event II is less than the earned income in Event I, then the individual pays, in addition to the tax of 25% of the *earned* income, a tax penalty that increases in the difference between the earned income and reported income as in the table that has been handed out.

You pay a tax penalty only if you are audited and if your reported income is less than the earned income.

#### ***Event IV***

Income taxes in this experiment will go into your group fund; they will be used to fund a public project that is valuable (in terms of experimental pounds) to you and your group members.

Each experimental pound (EP) that goes in the public fund is tripled. Therefore,

**Public fund** = 3 \* Income taxes collected from all the members in your group  
(Note: Tax penalty is not added to the public fund)

There are two types of public projects available in this experiment, Type C and Type G. The choice of which project is made available to you and your group is made by the official who is a member of your group.

The type of good that is chosen will be highlighted in GREEN on your screen.

The benefits of Type C good are shared equally among all 5 members of the group.

The benefits of Type G good accrue 50% to the official with the remainder split among the other four group members.

### **Earnings if public project of Type C is funded**

Public project earnings of:

- the official = Public fund / 5
- of each other member = Public fund / 5

### **Earnings if public project of Type G is funded**

Public project earnings of:

- the official = Public fund / 2
- of each other member = Public fund / 8

For example, if

Income taxes collected by the government in your group = 20 EP

Public fund =  $3 * 20 = 60$  EP

Earnings from public project of Type C:

When this project is chosen, then all the group members earn equal amount and the money in public fund is equally divided between all the group members.

Public project earnings =  $60 / 5 = 12$  EP

Earnings from public project of Type G:

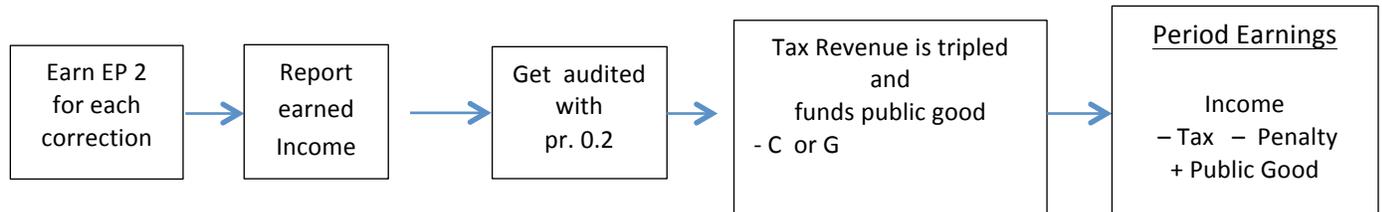
When this project is chosen, then the official will earn more than the rest of the group members: Half of the total amount of money in public fund is given to the official; the remaining half of the public fund is equally divided among all four remaining group members.

Public project earning of the official =  $60 / 2 = 30$  EP

Public project earnings of each other group members =  $60 / 8 = 7.5$  EP

Section IV below shows your total earnings or payoff in each decision period resulting from Events I to IV explained above.

The following diagram illustrates the sequence of events in every period



#### IV. Earnings in each decision period

##### Scenario I: If you are not audited

**Total earnings** = Earned Income – tax liability + public project earnings

(Note: As explained above, public project earnings depend on the type of public project provided to the group by the official)

##### Scenario II: If you are audited

**Total earnings** = Earned Income – tax liability – tax penalty + public project earnings

(Note: Tax penalty is equal to zero if your reported income is equal to your earned income)

(Also as explained above, public project earnings depend on the type of project provided to the group by the official)

**Final earnings at the end of the experiment** = (Total earnings in 14 rounds)/14

#### Questionnaire and payment

At the end of today’s experiment, you will complete a brief on-line questionnaire, receive payment of your earnings, and then the experiment is over. Information about your decisions will be kept without identifying information so no one can link you as an individual to the decisions that you make.

## Subject Instructions for the election treatment

Welcome and thank you for participating in today's experiment.

### I. Introduction

This is an experiment in the economics of group decision making. Your earnings will be determined by your own decisions and the decisions of others as described in the following instructions. **SO, IT IS IMPORTANT THAT YOU READ THESE INSTRUCTIONS CAREFULLY.**

This experiment is structured so that only you know your earnings. All of the money that you earn will be paid to you privately in cash immediately at the end of today's experiment. Various research agencies have provided the funds for the conduct of this research study.

*If you have any questions, RAISE YOUR HAND and an experimenter will come up to you to answer questions in private. Please feel free to ask as many questions as you like.*

### Time

This experiment will last around two hours.

### Scenario

In this experiment, you will be a member of a group of 5 individuals. You will be randomly assigned to a group and will remain in the same group for the entire experimental session.

Every group has an official who is selected randomly from among your group members by the computer at the beginning (before period 1) and in the middle (before period 8) of the experiment in the absence of a recall "election". Thus, a selected official remains the official of the group for eightfive periods unless the majority of members vote for a recall election. In case of a recall election, another official is selected randomly from among the eligible members of the group. A member of the group is eligible if he/she has not been a subject of a recall election during the last three elections. There are 14 decision periods in this experiment.

### Anonymity

You will not know the rest of your group members, neither will they know you.

### II. Monetary payoff

You earn money in Experimental Pounds (EP) in each decision period. This amount will be displayed on your computer screen at the completion of the decision period. At the end of today's experiment, your total accumulated earnings in experimental poundsdollars divided by the number of periods will be converted into Egyptian pounds at the below mentioned conversion rate. The more experimental pounds you earn, the more Egyptian pounds you will be paid.

1 Experimental Pound = 10 Egyptian Pounds

The following section explains how to earn money in each decision period.

### **III. Task and decision making process**

In this experiment, you will go through the below mentioned sequence of events in each of 14 decision periods.

#### ***Event I***

All subjects are given a simple task to find the spelling mistakes in a piece of text on the computer. You will be given 2 minutes to conduct the task. You can make corrections to the text by using your mouse to place your cursor in the correct area and make the correction. Use the mouse to move you to other parts of the text. You will earn 2 Experimental Pounds for each mistake that you correct accurately. There are a total of 10 errors. This income will be displayed on your screen at the completion of the task.

#### ***Event II***

Your earned income is what you earn in Event I. You will make the choice of how much of this earned income to report using the sliding scale on your screen. There is an income tax at 25% that you need to pay on the income you report. This tax rate is the same for all individuals belonging to the same group. As you move the slide to determine how much income you will report, you can see the consequences of your choice in terms of your net income if you are audited or not.

You can choose to report none of it, part of it or all of it. Consequently your reported tax liability is equal to:

$$25\% * \text{Reported Income}$$

#### ***Event III***

Once you choose the level of income you will report, a random audit will be performed. One subject out of five in the group will be chosen for audit so the likelihood of a subject being audited is 20%. If you are chosen for the random audit, your earned income will be disclosed to the official. If the audited individual's reported income in Event II is less than the earned income in Event I, then the individual pays, in addition to the tax of 25% of the *earned* income, a tax penalty that increases in the difference between the earned income and reported income as in the table that was handed out to you.

You pay a tax penalty only if you are audited and if your reported income is less than the earned income.

#### ***Event IV***

Income taxes in this experiment will go into your group fund; they will be used to fund a public project that is valuable (in terms of experimental pounds) to you and your group members. Each experimental pound (EP) that goes in the public fund is tripled. Therefore,

**Public fund** = 3 \* Income taxes collected from all the members in your group  
(Note: Tax penalty is not added to the public fund)

There are two types of public projects available in this experiment, Type C and Type G. The choice of which project is made available to you and your group is made by the official who is a member of your group.

The benefits of Type C good are shared equally among all 5 members of the group.

The benefits of Type G good accrue 50% to the official with the remainder split among the other four group members.

### **Earnings if public project of Type C is funded**

Public project earnings of:

- the official = Public fund / 5
- of each other member = Public fund / 5

### **Earnings if public project of Type G is funded**

Public project earnings of:

- the official = Public fund / 2
- of each other member = Public fund / 8

For example, if

Income taxes collected by the government in your group = 20 EP

Public fund =  $3 * 20 = 60$  EP

Earnings from public project of Type C:

When this project is chosen, then all the group members earn equal amount and the money in public fund is equally divided between all the group members.

Public project earnings =  $60 / 5 = 12$  EP

Earnings from public project of Type G:

When this project is chosen, then the official will earn more than the rest of the group members: Half of the total amount of money in public fund is given to the official; the remaining half of the public fund is equally divided among all four remaining group members.

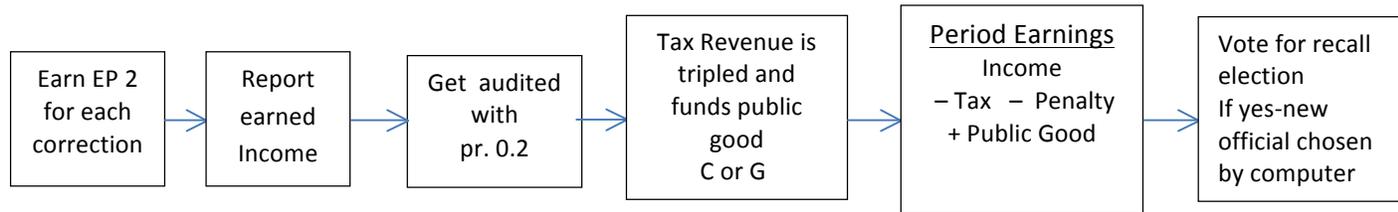
Public project earning of the official =  $60 / 2 = 30$  EP

Public project earnings of each other group members =  $60 / 8 = 7.5$  EP

### ***Event V***

Once the public good decision is made, you will see a screen that asks whether you would like a recall election or not. If the majority of the group chooses yes, then the computer will choose a new official.

The following diagram illustrates the sequence of events in every period



Section IV below shows your total earnings or payoff in each decision period resulting from Events I to IV explained above.

#### IV. Earnings in each decision period

##### Scenario I: If you are not audited

**Total earnings** = Earned Income – tax liability + public project earnings

(Note: As explained above, public project earnings depend on the type of public project provided to the group by the official)

##### Scenario II: If you are audited

**Total earnings** = Earned Income – tax liability – tax penalty + public project earnings

(Note: Tax penalty is equal to zero if your reported income is equal to your earned income)

(Also as explained above, public project earnings depend on the type of project provided to the group by the official)

**Final earnings at the end of the experiment** = (Total earnings in 14 rounds)/14

#### V. Questionnaire and payment

At the end of today's experiment, you will complete a brief on-line questionnaire, receive payment of your earnings, and then the experiment is over. Information about your decisions will be kept without identifying information so no one can link you as an individual to the decisions that you make.

Penalty Structure:

Unreported Income	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Tax Penalty if Audited	0.10	0.28	0.52	0.80	1.12	1.47	1.85	2.26	2.70	3.16	3.65	4.16	4.69	5.24	5.81	6.40	7.01	7.64	8.28	8.94

## INSTRUCTIONS

Below are several questions relating to your demographic information, your views concerning some economic and political issues, and experience with tax reporting. These questions may be of a sensitive nature. Although your name will not be matched with your responses in any way and all information provided will be kept strictly confidential, you may be uncomfortable or unable to answer all questions. Please indicate if you prefer not to answer a particular question or if you would like to leave the study at any time. If you choose to answer the questions, please answer them honestly and to the best of your ability.

### 1. In what year were you born?

Year: \_\_\_\_\_

### 2. Are you?

- Male
- Female

### 3. What is your current grade point average? \_\_\_\_\_

### 4. What is your field of study?

\_\_\_\_\_

### 5. What is your religious affiliation?

- Muslim
- Copt
- Catholic
- Protestant
- Other
- No Religion
- Prefer Not to Answer

### 5. Are you currently working?

- Yes, I have a full-time job
- Yes, I have a part-time job
- Yes, I am self-employed
- No, I am still studying
- No
- Prefer Not to Answer

### 6. Have you ever had a paid job?

- Yes
- No
- Do not know
- Prefer not to answer

### 7. What is your year in university now?

- Freshman
- Sophomore
- Junior
- Senior
- Graduate Student
- I am not currently enrolled in university
- Prefer Not to Answer

### 8. What is your current marital status?

- Single
- Engaged
- Married
- Separated
- Divorced
- Widowed
- Prefer Not to Answer

### 9. I seek opportunities for doing things that I never did before

- Yes
- No
- Don't know
- Prefer not to answer

**10. I don't worry about the consequences of what I do.**

- Yes
- No
- Don't know
- Prefer not to answer

**11. I never get lucky breaks.**

- Yes
- No
- Don't know
- Prefer not to answer

**12. I frequently get jittery and worry about things.**

- Yes
- No
- Don't know
- Prefer not to answer

**13. I proceed with care in most endeavors.**

- Yes
- No
- Don't know
- Prefer not to answer

**14. I tend to do dangerous things without adequate precautions.**

- Yes
- No
- Don't know
- Prefer not to answer

**15. While at university, did you take part in social activities?**

- Yes
- No
- Don't know
- Prefer not to answer

**16. If yes in answer 15, in which social activities did you take part?**

.....

**17. Do you have friends?**

- Yes
- No
- Don't know
- Prefer not to answer

**18. Do you share your secrets with some of them?**

- Yes
- No
- Don't know

Prefer not to answer

**19. Would you say that most people can be trusted?**

- Yes
- No
- Don't know
- Prefer not to answer

**20. Do you think democracy, with multiple political parties and free elections, is the best system for governing Egypt?**

- Agree
- Disagree
- Don't know
- Prefer not to answer

**21. Do you think the following institutions are trustworthy?**

	Agree	Disagree	Don't know	Prefer not to answer
Judiciary				
Parliament				
Government				
Religious leaders				
State media				
Private media				

**22. Thinking now of the country as a whole, do you think compared with five years ago, standards of living have?**

- Fallen a great deal
- Fallen a little
- Stayed the same
- Risen a little
- Risen a lot
- Don't know
- Prefer not to answer

**23. Here is a list of existing problems in Egypt today. Tick the biggest problem and the second biggest problem:**

	a. Biggest problem	b. Second biggest problem
Poor public goods and services		
Unemployment		
Poverty		
Corruption		
Security/crime		
Protests		
Wages and salaries		

**24. What do you think about the following statement?**

	Agree	Disagree	Don't know	Prefer not to
--	-------	----------	------------	---------------

				answer
Free elections are the means to solving the above mentioned problems.				

**25. Are you generally satisfied with the quality of public goods and services provided by the government?**

- Yes
- No
- Don't know
- Prefer not to answer

**26. What do you think about the following statements?**

	Agree	Disagree	Don't know	Prefer not to answer
It is okay not to declare everything one earns to the tax authorities				
Most people try to avoid paying their fair share of tax				

**27. Have you participated in an economics experiment previously?**

- Yes
- No
- Don't know
- Prefer Not to Answer

**28. Have you filed tax return before?**

- Yes
- No
- Don't know
- Prefer Not to Answer

WELCOME and THANK YOU  
for  
Participating in this Experiment

*If you have any questions, RAISE YOUR HAND  
and  
an experimenter will come up to you to answer  
questions in private.  
Please feel free to ask as many questions as you like*

# Summary

- How many periods are in this experiment?
  - 2 practice periods (not paid)
  - 14 decision periods (paid)
- How is your final earnings determined?
  - $(\text{Total earnings in 14 rounds})/14$
- How do you earn money?
  - Correcting spelling mistakes
  - Receive a share of the Public Good

# Public Good

- Where does money for funding a public good come from?
  - (tripled) Income Tax Revenue
- What public goods are possible?
  - Good G: quadruple earnings for the official (50%)  
Equal earnings for remaining members (12.5% each member)
  - Good C: equal earnings for members and the official (20% each)
- Who decides which public good to fund?
  - the official
- How is the official selected?
  - Randomly by the computer (before rounds 1 and 8) in case of NO RECALL elections
  - In case of a recall, for how many rounds after being recalled is the official not eligible to serve as official?  
Two

# Decision Task of a Member

## 1. HOW MUCH of the earned money to REPORT

- Suppose you corrected 8 words. How much money do you earn?
  - EP16
- Suppose you decide to report EP8. How much does this decision cost you?
  - If NOT audited, you pay
    - **Tax: EP2**(=8\*0.25)
  - If audited, you pay
    - **Tax: EP4**(=16\*0.25) PLUS **Penalty: EP2.26** (see Table 1, column “8”)
- Who gets audited?
  - Only one of the five individuals in the group, randomly selected by the computer

# Decision Tasks of an Official

## 1. HOW MUCH of his/her earned money to REPORT

- Does an official pay taxes?

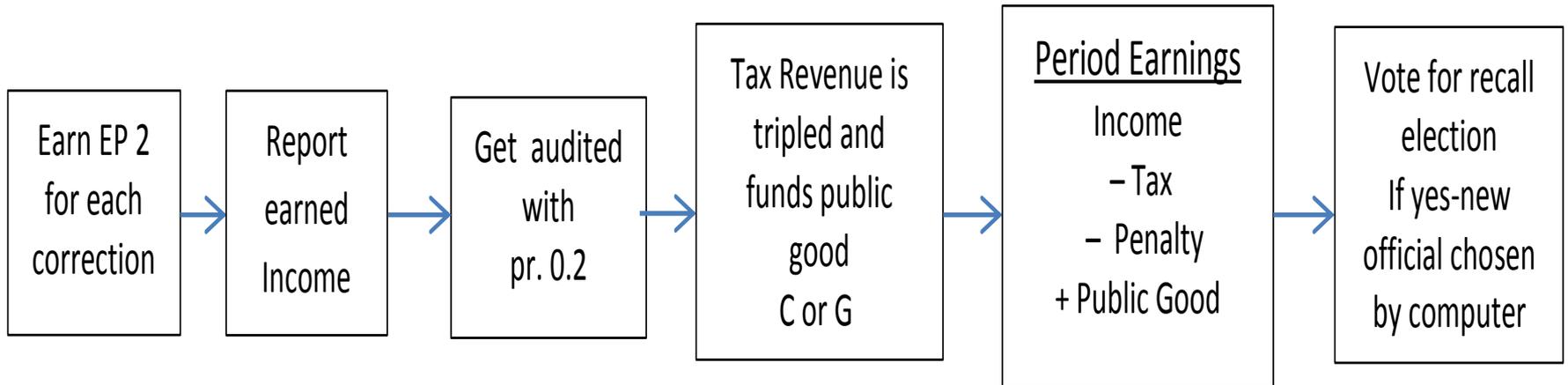
- Yes

- Can an official be audited?

- Yes

## 2. Which public good to fund

# Sequence of events in every period



WELCOME and THANK YOU  
for  
Participating in this Experiment

*If you have any questions, RAISE YOUR HAND  
and  
an experimenter will come up to you to answer  
questions in private.  
Please feel free to ask as many questions as you like*

# **INVITATION**

**Cairo University**

**Faculty of Economics and Political Science (FEPS)**

**&**

**Georgia State University**

**Andrew Young School of Policy Studies (AYSPS)**

**International Center for Public Policy**

**“Partnership Concluding Conference”**

**“Enhancing Capacity for Research in Economics”**

**Date: Tuesday, June 25, 2013**

**Time: 10:00-17:00**

**Location: FEPS**

**Cairo University, Egypt**

**For registration or more information**

**Please contact International Relations Office at FEPS**

**[IB@feps.edu.eg](mailto:IB@feps.edu.eg)**

**or**

**[marian3adel@gmail.com](mailto:marian3adel@gmail.com)**

## Agenda

AYSPS–FEPS Partnership Conference

"Egypt: Enhancing Capacity for Research in Economics"

25<sup>th</sup> June 2013-FEPS Council Room-Second Floor

<b>Time</b>	<b>Tuesday 25<sup>th</sup> June 2013</b>
<b>10:00-10:30</b>	<b>Registration</b>
<b>10:30-11:00</b>	<b>Opening Session</b>
	<ul style="list-style-type: none"><li>• <b>Prof. Heba Nassar – Vice President of Cairo University.</b></li><li>• <b>Prof. Hala El Said – Dean of Faculty of Economics and Political Science, Cairo University.</b></li><li>• <b>Prof. Mary Beth Walker – Dean of Andrew Young School of Policy Studies, Georgia State University.</b></li></ul>
<b>11:00-13:00</b>	<b>First Session: Evaluation of Partnership – Stories of Success and Lessons Learned</b>
	<b>Chairperson</b> <ul style="list-style-type: none"><li>• <b>Prof. Lobna Abdel Latif – Professor of Economics and former Head of Economics Department.</b></li></ul>
	<b>Speakers</b> <ul style="list-style-type: none"><li>• <b>Dr. Amirah El-Haddad – Associate Professor of Economics and Coordinator of AYSPPS – FEPS Partnership.</b></li><li>• <b>Prof. Manal Metwaly – Professor of Economics and Head of Financial and Economics Studies Centre.</b></li><li>• <b>Sarah A. Mansour – Assistant Lecturer at Department of Economics and Co-author of the joint paper “Tax Compliance and Trust in</b></li></ul>

## Agenda

### AYSPS–FEPS Partnership Conference

#### "Egypt: Enhancing Capacity for Research in Economics"

25<sup>th</sup> June 2013-FEPS Council Room-Second Floor

	<p><b>Post-Revolutionary Egypt”.</b></p> <ul style="list-style-type: none"><li>• <b>Mahmoud El Sayed – Assistant Lecturer at Department of Public Administration with Masters of Public Policy from AYSPS–GSU.</b></li></ul>
<b>13:00-14:00</b>	<b>Lunch Break &amp; Networking at Host House of Cairo University</b>
<b>14:00-17:00</b>	<b>Second Session: AYSPS-FEPS Joint Papers Seminar</b>
	<p><b>Chairperson</b></p> <ul style="list-style-type: none"><li>• <b>Prof. Mary Beth Walker – Dean of Andrew Young School of Policy Studies, Georgia State University.</b></li></ul>
	<p><b>Speakers</b></p> <ul style="list-style-type: none"><li>• <b>Dr. Musharraf R. Cyan (AYSPS) – Assistant Research Professor at Andrew Young School of Policy Studies.</b></li><li>• <b>Prof. Lobna Abdel Latif (FEPS) – Professor of Economics and Ex-Head of Economics Department.</b></li><li>• <b>Prof. Mary Beth walker (AYSPS) – Dean of Andrew Young School of Policy Studies, Georgia State University.</b></li><li>• <b>Dr. May Gadalla (FEPS) – Assistant Professor at Statistics Department.</b></li><li>• <b>Prof. Manal Metwaly (FEPS) – Professor of Economics and Head of Financial and Economics Studies Centre.</b></li></ul>
	<b>Dr. Musharraf R. Cyan (AYSPS) Prof. Lobna Abdel Latif (FEPS)</b>

**Agenda**

**AYSPS–FEPS Partnership Conference**

**"Egypt: Enhancing Capacity for Research in Economics"**

**25<sup>th</sup> June 2013-FEPS Council Room-Second Floor**

	<p><b>Prof. Jorge Martinez–Vasquez (AYSPS)</b></p> <p><i>“Is Fiscal Decentralization Harmful to Business Climate?”</i></p>
	<p><b>Prof. Mary Beth Walker (AYSPS) Dr. May Gadalla (FEPS)</b></p> <p><i>“Outcomes-Based Assessment of Supplemental Tutoring in Egypt: Evidence from the Egypt Labor Market Panel Survey”</i></p>
	<p><b>Prof. Manal Metwaly (FEPS) Prof. Andrew Feltenstein (AYSPS)</b></p> <p><b>Jeffrey Condon (AYSPS) Nour Abdel Razzak ( Chicago University)</b></p> <p><i>“Macroeconomic Policies and Growth in Egypt: Policy Options”</i></p>



# ***Enhancing Capacity For Research In Economics***

A Georgia State University  
And Cairo University Partnership  
executed through:

Andrew Young School of Policy Studies (GSU)  
International Center for Public Policy  
&  
Faculty of Economics and Political Science (CU)

Concluding Conference  
June 25, 2013  
FEPS  
Cairo University

# *Main Targets*

- Strengthen the academic capacity of DOE-FEPS
- Strengthen the outreach capacity of DOE-FEPS
- Strengthen the applied research capacity of DOE-FEPS in order to engage in the support of better informed decisions and policy-making
- Create an international network of experts in support of Egypt's public policy reform
- Integrate appropriate information technology and distance learning techniques into the academic and outreach components of this project

# *Main Pillars of Cooperation*

**Faculty Training Programs**

**The Student Exchange Program**

**Technical Support**

**Faculty Exchange Program**

**Research Papers & Seminars**

# Faculty Training Programs

## Experimental Research Methods

- **Dr. Susan Laury**
- **March 29–April 9, 2009**
- **30 participants**

## Advanced Econometrics, Research Methodology, and Evaluative Methods for Social Policy Analysis

- **Dr. Shiferaw Gurm**
- **November 15–26, 2009**
- **30 participants**

## Public Economics

- **Dr. Sally Wallace**
- **January 15–19, 2012**
- **19 participants**

## Financial Econometrics

- **Dr. Richard Lugar**
- **January 21–26, 2012**
- **31 participants**

# The Student Exchange Program

**Mahmoud Abduh Ali Elsayed**

Teaching Assistant, Department of  
Public Administration, Cairo  
University, Faculty of Economics  
and Political Science



- He was accepted by Georgia State University, Andrew Young School, to pursue a two year Masters' of Public Policy Program
- He finished the program successfully on June 10, 2013

# Technical Support

## **FEPS Website**

- FEPS Labs Units and Technology Clubs designed and constructed a professional, user friendly and sustainable website
- FEPS professors and GSU experts participated by providing useful comments and advices
- There was a problem in the resolution but FEPS Labs Units and Technology Clubs managed to solve it

## **STATA Licenses**

- 30 licenses of STATA 11 (25 lab licenses and 5 single user licenses) were shipped and received by Cairo University

## **Experiment Labs**

- FEPS have replicated the dividers at the Experimental Economics Center at AYSPS and we now have lab 4 well equipped to host experiments anytime.

# Faculty Exchange program

- Dr. Manal Mohammed Mohammed Metwaly
  - Dr. May Mokhtar Aly Gadalla

June 15–July 10, 2011



- Dr. Lobna Mohamed Abdel Latif Ahmed
- Dr. Nagwa Abdalla Abdelaziz Samak
  - Dr. Mona Esam Osman Fayed
- Dr. Hanan Hussien Ramadan Nazier

July 24–August 18, 2011



- Dr. Amirah Moharram Saleh El.Haddad

July 30–October 26, 2011

## Research Papers & Seminars

Dr. Manal Metwaly;

June 29, 2011



“The Egyptian Economy- Post January 25th: Challenges and the Way Forward”

Dr. Lobna Abdul Latif, Dr. Nagwa Samak, Dr. Amirah El-Haddad, Dr. Mona Essam, and Dr. Hanan Nazier;

August 8, 2011



“Recent Economic and Political Developments in Egypt and Future Prospects” Panel Discussion

Dr. Manal Metwaly, Dr. Andrew Feltenstein, Jeffrey Condon, and Nour Abdul-Razzak;

January 17, 2012



“Macroeconomic Policies and Growth in Egypt: Policy Options”

## Research Papers & Seminars

Dr. Sally Wallace, Dr. Vjollca Sadiraj, Sarah A. Mansour, and  
Krawee Ackaramongkolrotn;

March 17–21, 2013



“Tax Compliance and Trust in Post-Revolutionary Egypt”

Dr. Lobna Abdul Latif, Dr. Musharraf Cyan and Dr. Jorge Martinez-Vazquez;  
June 25, 2013



"Is Fiscal Decentralization Harmful to Business Climate?"

Dr. May Gaddalah and Dr. Mary Beth Walker;  
June 25, 2013



“Outcomes-Based Assessment of Supplemental Tutoring in Egypt:  
Evidence from the Egypt Labor Market Panel Survey”

## Research Papers & Seminars

Dr. Amirah El-Haddad;  
Forthcoming



“Female Wages in the Egyptian Textiles and Clothing Industry:  
Low Pay or Discrimination” submitted with revisions to Journal of  
Feminist Economics

### *Letter of Intent*

***"Georgia State University (Andrew Young School of Policy Studies) and Faculty of Economics and Political Science, (FEPS) ,Cairo University"***

#### ***Back ground of partnership***

Since 2008, 5 main pillars of cooperation have been achieved between Georgia State University (Andrew Young School of Policy Studies) and Faculty of Economics and Political Science, Cairo University and they are : training programs , Student Exchange Program and one teaching assistant from Public Administration department applied for Masters' degree in (AYSPS), technical support through establishing FEPS's Website , achieving STAT Licenses and ,experimental labs and faculty exchange program, research papers & seminars.

This partnership aimed to contribute to economics development in Egypt and in the region by achieving more informed policy making by building human capacity in academia, governments and civil society through education and training.

The main aim of this partnerships is Strengthening sustainable outreach capacity in order to serve as a regional hub for teaching, research, and a provider of technical assistance and service in economics in Egypt .

Additionally this partnership envisioned a strong research development component that enabled a number of research joined activities between Georgia state university and FEPS faculty.

#### ***Ongoing Activities in 2013-2014***

- 1-Accepting Visiting Scholars for a semester in Economics and Public Policy at Georgia State University.
- 2- Enhancing joint research work in areas of experimental economics , political economy, financial economics and Public Policies.
- 3-Short-term visiting Professors in one of our elective post graduate course from Georgia State University in Economics or Public Policy to teach Experimental Analysis, behavioral economics or political economy
- 4- Building capacity for Public Policy department / center in training government officials on Public Policy issues.

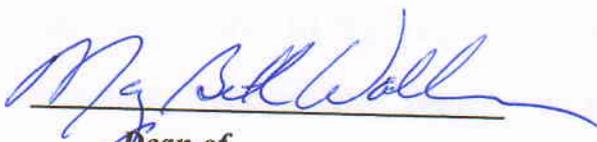
5-Short visits for teaching assistant from FEPS to attend some courses or intensive training programs for building up their capacity of research.

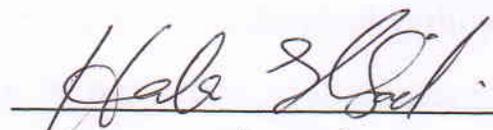
***Potential Activities between Georgia State University and Faculty of Economics and Political Science, Cairo University***

- 1-Joint certificate in Economics and Public Policy.
- 2-Masters` degree in Economics and Public Policy.
- 3-PhD degree in Economics and Public Policy.
- 4-Mutual visiting in the aim of increasing the number of research between FEPS and Georgia University.
- 5-Increasing opportunities for scholarships in post graduate studies in Economics , statistics , Political Science , Public Administration departments.

***It is in the mutual interest of all project partners to deepen the cooperation***

***Place, Date***      25/06/2013

  
\_\_\_\_\_  
***Dean of***  
***Andrew Young School***  
***Policy Studies- Georgia***  
***State University***

  
\_\_\_\_\_  
***Dean of***  
***Faculty of Economics & Political***  
***Science – Cairo University***

**Appendix B: External Sustainability and Strategic Impact Assessment**

# Evaluation Report

Egypt: Enhancing Capacity for Research in Economics

Ellen Fitzpatrick, Ph.D.  
University of Arkansas Clinton School of Public Service

December 2013

## Table of Contents

Executive Summary .....	3
Program Description.....	5
Evaluation Methodology.....	5
Research Protocol	
The Conceptual Foundations	
Partnership Theory of Change	
Re-Constructed Theory of Change	
Partnership Accomplishments.....	11
Faculty Development.....	12
Short courses at FEPS	
Activity	
Outcomes	
Implementation Assessment	
Faculty Exchanges	
Research	
Activity	
Outcomes	
Implementation Assessment	
Curriculum Development	
Activity	
Outcomes	
Implementation Assessment	
Outreach and Policy Expertise	
Activity	
Outcomes	
Implementation Assessment	
Information Technology.....	17
Activity	
Outcomes	
Implementation Assessment	
FEPS student Admission to AYSPS.....	18
Activities	
Outcomes	
Implementation Assessment	
Sustainability Prospects.....	20
Collaborations	
Capacity	
Long-Term Impact.....	21
Lessons Learned from Partnership.....	22
Recommendations for Continued Capacity Building.....	22
Appendices.....	24
Appendix A: Survey Questions.....	24
Appendix B: Survey Responses.....	29
Appendix C: Short Course Evaluations.....	39
Appendix D: Scope of Work.....	42

## **Egypt: Enhancing Capacity for Research in Economics AYSPS-FEPS Partnership**

### **I. Executive Summary**

A partnership between the Georgia State University (GSU) Andrew Young School of Policy Studies (AYSPS), and Cairo University (CU) Department of Economics (DOE) Faculty of Economics and Political Science (FEPS) began in 2008. The completion of this three-year project was delayed for a year due to political upheaval in Egypt in 2011. The partnership was concluded in August 2013.

The goal of the partnership between AYSPS and FEPS was to increase the capacity of FEPS faculty in economic research, outreach and as such to serve as a hub for research, teaching and technical economic assistance in the region.

The five objectives of the partnership have been to:

1. Strengthen the academic capacity of FEPS;
2. Strengthen the outreach capacity of FEPS;
3. Strengthen the applied research capacity of FEPS to support well informed decisions and policy-making;
4. Create an international network of experts to support Egypt's public policy reform and;
5. Integrate information technology and distance learning techniques into the academic and outreach components of the partnership<sup>1</sup>.

The key activities that have been undertaken to support these objectives have been short courses in key areas of interest at FEPS, academic visits by FEPS faculty to AYSPS, joint research projects between FEPS and AYSPS faculty, FEPS student matriculation into the Master's program at AYSPS, and the development of the information technology to support academic and outreach activities at FEPS.

The purpose of this evaluation is to provide stakeholders with an assessment of the *Cairo University-Georgia State University Partnership: Enhancing Capacity for Research in Economics*. The objectives of this study are:

- To evaluate the partnership by articulating the partnership's theory of change and the methodology used to assess the extent to which intended outcome are accomplished.
- To assess the partnership contributions to outcomes as described in the reconstructed theory of change.
- To document and discuss lessons learned from implementation of the partnership.

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<sup>1</sup> Objectives adapted from the initial project proposal, "Egypt: Enhancing Capacity for Research in Economics" Georgia State University and Cairo University. Submitted by Andrew Young School of Policy Studies, June 2008.

- To provide recommendation to FEPS, AYSPS, HED and USAID on strategies and actions to ensure the achievement of long term objectives.

The primary tools used to evaluate the Partnership include project documents, in-country interviews with key stakeholders and beneficiaries at Cairo University, and follow-up questionnaires to administrators, faculty, staff and students at both CU and GSU. The in-country interviews with partnership participants were held from June 24-27, 2013. This was cut short from the intended time period of six days because of imminent political turmoil in Cairo. The current political and economic upheaval in Egypt has also dampened the responses to follow-up surveys received from participants and stakeholders at Cairo University.

#### Key Findings:

- Human capacity was furthered through joint faculty research projects where research skills, new areas of expertise, and the integration of knowledge into a long run research agenda were enhanced.
- Faculty visits to AYSPS also allowed for enhanced human capacity through exposure to resource rich libraries, collegial discussions and observations of pedagogical innovations.
- Institutional capacity was enhanced by the Partnership as both institutions are engaged in building a long-term collaborative research agenda. This collaborative research is a key component to maintaining a sustainable relationship.
- The short courses offered by AYSPS faculty at FEPS also contributed to the development of human capacity. These courses were an effective means to introduced faculty, staff and colleagues from other institutions to new ideas and techniques in economics and policy analysis. These courses need to have manageable amount of material and be on-going to build expertise over time. The continuation of these short courses whether provided by AYSPS faculty or later by FEPS faculty will be an important component of outreach to the larger policy community and will contribute to the reputation of FEPS as a training hub.
- Information technology expertise has been critical in supporting outreach capability and on-going research and teaching innovations.

#### Recommendations:

- Faculty development is the lynchpin for achieving many of the elements of becoming a regional hub for economic and policy expertise. Therefore deepening the relationship with AYSPS through continued joint projects and a mutual exchange of faculty and students are important post-project steps. A joint graduate program between FEPS and AYSPS was discussed as part of an end of project MOU. This type of activity will continue to deepen ties, as it will create common academic goals as well as a growing network of scholars within the institutions and the profession.
- To ensure the sustainability of this investment in human and institutional capacity, it is important for FEPS to plan for securing resources that will encourage continuous faculty development. This includes investing in

electronic library resources, essential for staying current in the field, participating in trainings, conferences, international collaborations, and policy outreach.

## **II. Program Description**

The partnership between AYSPS and FEPS was undertaken to enhance a growing capacity in economic research and policy analysis in region. It is hoped that this increased capacity will contribute to an active debate on economic and public policy concerns facing Egypt and the region.

The activities of the partnership centered on faculty development. One of the components was short courses in Experimental Research Methods, Advanced Econometrics, Public Economics and Advanced Econometrics at FEPS. Faculty also traveled to AYSPS to work with colleagues to develop joint research projects, explore curriculum innovations, attend short courses and gain access to electronic library resources and current texts in the field. Another component of the partnership was the matriculation of a FEPS student into the AYSPS Master's program. As many of the faculty in FEPS are recruited through the ranks of their best students, this was a way to invest in the next generation of academic leadership. The FEPS instructional technology team in consultation with GSU was also enlisted to support innovations in research, curriculum development and outreach activities. They played an important role in website design, installation of supporting software and in facilitating distance learning.

## **III. Evaluation Methodology**

### **1. Research Protocol**

This assessment effort produced quantitative and qualitative evidence of impact on FEPS and AYSPS faculty and staff and on the institutions themselves. These findings and results are drawn from a comprehensive review of information from several independent sources

- Project documents, reports submitted to HED from partner universities and HED annual/semi annual reports
- In-country and telephone interviews with administrators, faculty, staff and students at both institutions
- Follow up surveys based on the role in the partnership.

The development of a methodology began with a review of project documents to map out a theory of change (ToC). The objective of the ToC was to establish the logic and underlying assumptions linking project activities, with outcomes and outcomes with the goals or impact. For example, in this partnership it was hypothesized that the most appropriate intervention to meet the goals of increased human and institutional capacity was through a combination of short courses in key areas of economic policy and collaboration of faculty at AYSPS and

FEPS in joint research projects. Outcomes are the direct indicators that progress is being made towards more long-term goals. In a short-term partnership such as this, it is unlikely that there will be sufficient time to show measurable impact therefore assessing the level of outcomes is an important indicator of success. For example, the short courses may increase a faculty's knowledge in a particular area of economic analyses but it will take time to build the level of expertise needed to incorporate those skills into a new class or an established research agenda. Outcomes such as new classes or published papers may occur largely after the end of the project. Impact, such as FEPS developing the reputation as experts in policy analysis, will come about as publications and curriculum increase over time. The ToC, which is based on project documents, provides the initial framework to guide the expectation of deliverable outcomes and assessment of impact.

This framework was revised as the best intentions of the authors of the partnership proposal adjusted to the realities of implementing the project. This revision is the reconstructed theory of change. Key informant interviews and project documents were used to develop a reconstructed theory of change. This process reveals changes made in activities and the major factors influencing the achievement of outcomes. To develop an understanding of the revisions made to the partnership, faculty, staff and administrators from CU-FEPS and GSU-AYSPS were interviewed in person, through emailed surveys and/or telephone interviews.

The in-country interviews and discussions with program participants (faculty and students, administrators), and government officials provided qualitative and quantitative depth to the program's systematic reports. This included assessing key informant's opinion about enhanced capacity in research, pedagogy/course design, outreach and networking. The line of questioning included how workshops (seminars) strengthened research and analysis skills, the effectiveness of mentoring in conducting and publishing research in new areas of expertise, the confidence in designing and delivering new curriculum, and the use of web-based resource center as a mechanism for networking. Results of these interviews were transcribed. Triangulation, a process of asking the same question to participants with different functions in the program, was used to assess the reliability of the responses.

Qualitative data was analyzed by observing reoccurring themes and noting outliers to these themes. All the direct participants in the Partnership were interviewed or responded to survey questions. Because each category of participant was small e.g., faculty involved in travel to AYSPS (7), student matriculation (1), faculty at AYSPS (8), it was possible to incorporate the experience of every participant. Those involved in the short classes at FEPS--both FEPS faculty/staff and outside guests, submitted general comments for two of the four classes offered. The aggregated comments were again analyzed for common themes and outliers noted.

The project goals, sustainability of human and institutional capacity, were assessed using both structured interviews and preliminary outcome measures. Outcome measures both proximal and distal are listed in the ToC. Each type of key informant and/or participant was asked for an assessment of how the Partnership's activities translated into long-term professional opportunities and the ways in which the institutions can support these changes to ensure sustainability

Key informant interviews and project documents informed lessons learned from the implementation of the partnership, strategies for continuous capacity building, and strategic initiatives to encourage long run sustainability. The small numbers of direct participants in the Partnership allowed each person to be interviewed and the recurrent responses noted in this assessment.

Participants and key informants were interviewed either in person or through email correspondence. The time to conduct interviews in Egypt was cut in half due to extreme political disruption. The response rate to follow-up surveys was less than 20%. The low response rate is likely attributable to extreme political and economic disruption in Cairo. Support staff at FEPS reported that faculty and staff have found it dangerous to travel to the CU campus. Electricity and Internet connections have also been disrupted through the summer months. Interview questions are in Appendix A.

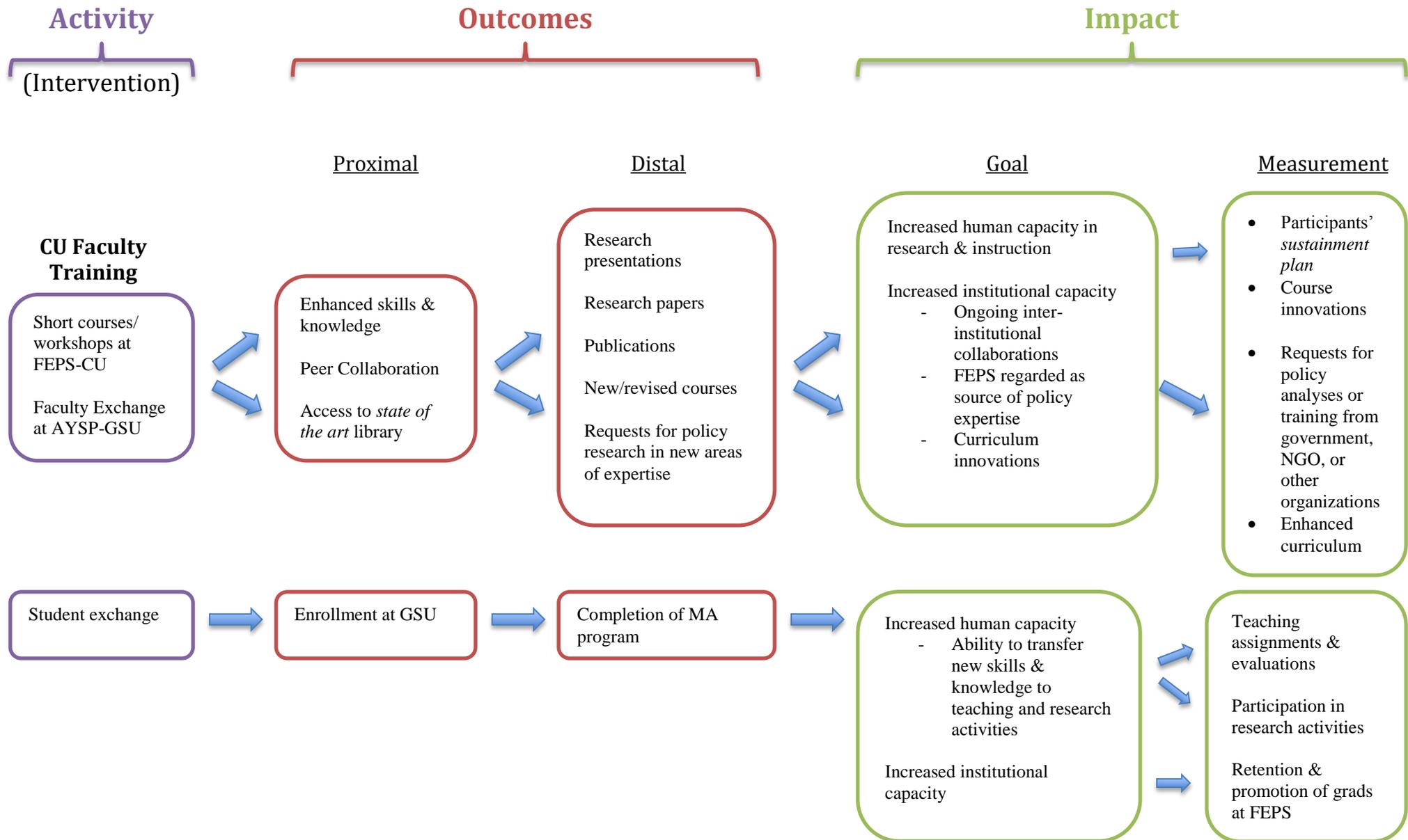
**Table 1. Response rates from Partnership Participants**

	Numbers involved	Interviewed (in person or by phone)	Responded to survey
FEPS student to AYSPS	1	1	1
Administrators CU-FEPS	3	2	1
Workshop Participants <sup>2</sup>	70	2	4
Research Collaborators	4	4	3
Exchange- non research	3	2	1
Information Technology	1	1	1
Administrators AYSPS	2	2	2
Research Collaborators AYSPS	6	3	5
Faculty AYSPS – short courses	4	0	3

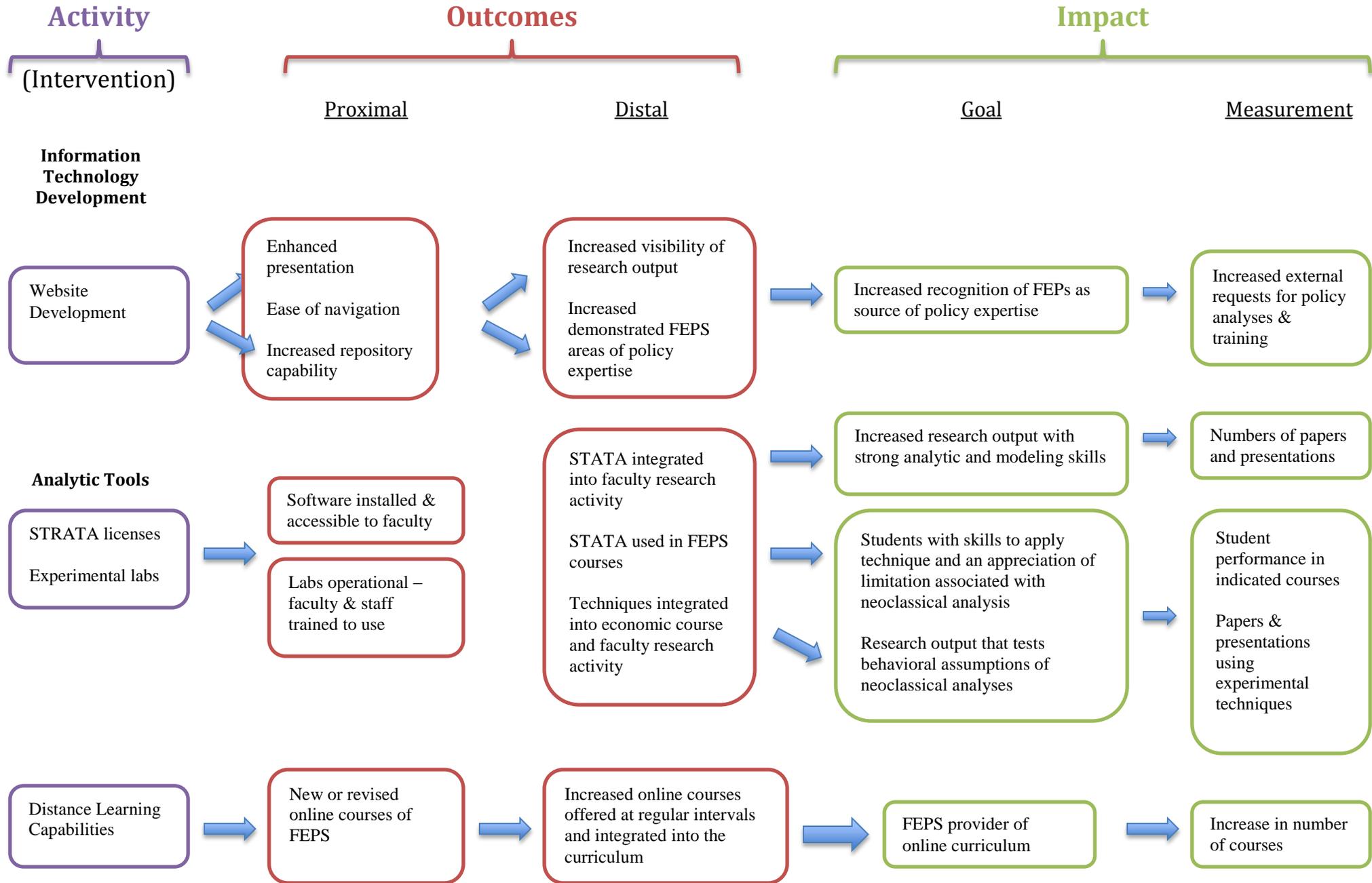
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<sup>2</sup> A qualitative assessment was submitted to the evaluator that was completed at the end of two of the short courses. The results of this evaluation are in Appendix C.

# Enhancing Capacity for Research in Economics Cairo University-Georgia State U 2010-13



# Enhancing Capacity for Research in Economics Cairo University-Georgia State U 2010-13



## **2. The Conceptual Foundations**

### **A. The Partnership's Theory of Change**

The above flowchart illustrates the reconstructed theory of change. This theory was extracted from project documents, key informant interviews and project participants.

One of the main goals of the Partnership was to enhance the human capacity of the CU-FEPS faculty through expanding skills in economic research and instruction. Institutional capacity would also be affected by enhanced faculty expertise, which would situate CU-FEPS as a center for on-going international collaborations, and policy expertise. The activities that were designed to meet these goals included short courses at FEPS conducted by faculty from GSU-AYSPS and selected FEPS faculty working with AYSPS faculty at GSU. The short courses, collaborative research projects and access to library resources would result in enhanced skills and knowledge with the distal outcomes being research presentations and papers, publications in peer-reviewed journals, and external requests for policy research. These areas of developing research and policy expertise should also create spillovers into course and curriculum innovations at FEPS.

Another activity to enhance the future human and institutional capacity is the matriculation of FEPS students into the Public Policy Masters Program at AYSPS. If the outcome of matriculation is completion of the Master's degree, then there are two potential impacts. First, the student increases his or her academic capacity (new knowledge, skills, analytical ability). Secondly, FEPS, as an institution benefits as they hire faculty from within their graduate student population. The better prepared their graduate students are, the better researchers and teachers they will be in the future and the stronger FEPS will be as a policy research institution

Information technology activities include the redesign of the FEPS website, and the implementation of analytical tools to facilitate faculty research and student learning, and the enhancement of the distance learning capabilities of FEPS. It is expected that the redesign of the website will increase the visibility of FEPS research output and recognition of FEPS as a source of policy expertise. The effectiveness of IT to bring the activity of FEPS to the larger community assumes that new activity is created and that participants are willing to make their work available on the site.

The expected outcome from the installation of new statistical software and laboratory equipment is the integration of these tools into economics courses and faculty research. The goal is to increase quantitatively oriented research by the faculty and to imbue students with the skills to test the assumptions of traditional neoclassical analyses. Enhanced distance learning capabilities will result in new on-line course offerings, offered at regular intervals and integrated in the curriculum. The underlying hypothesis is that an increase in on-line courses will contribute to FEPS reputation as a leader in e-learning.

## **B. The Re-constructed Theory of Change**

Reconstructed theory of change (RToC) may occur to accommodate changes at the margin that include new priorities, programmatic insights and logistical challenges. RToC may also occur when a thorough needs assessment has not preceded program design. A needs assessment would assist in identifying the nature and characteristics of the problem that is being addressed. This would enable key stakeholders to articulate the assumptions linking needs with the activities or interventions. Since a needs assessment was not part of the project documents it is unclear whether revisions were made because of a mismatch between need, activity, and outcomes or because of changes in other situational variables.

The change that provides the most variance between project documents and participant activity is the emphasis put on pedagogy and curriculum development. This diminution of curricular activities and pedagogy will also influence outcomes and the likelihood that the elements of increased institutional capacity centering on curriculum innovations will be not be realized.

A reduction in the number of FEPS students that matriculated at AYSPS is also a change in the implementation of the partnership. Since FEPS students provide an important source of future staff and faculty, a reduction in participants may affect the goal of sustainability of enhanced academic and outreach capacity.

Other changes in activities that are part of the RToC but are not as likely to have important impacts on outcomes and attainment of long-term goals are:

- lower priority on technology development to support innovations in curriculum development and as a marketing tool to showcase growing policy expertise.
- Increased numbers of participants with GSU exchange but with a reduction of time available for skill acquisition and peer collaboration.

## **IV. Partnership Accomplishments**

This section will describe the Partnership activities and report on the progress made towards anticipated outcomes. This section will also discuss the challenges and successes in implementing the partnership.

The main goal of the FEPS-AYSPS partnership as stated in the original proposal was to “expand the capacity of FEPS faculty in economic research and to strengthen Cairo University’s ability to serve as a regional hub for teaching, research, and service in economics and economic policy” (HED, Associate Award, AEG-A-00-05-0007-00*Partnership to Strengthen the University of Cairo Department of Economics and Political Science* 8/14/2008, p.2.).

There are several ways the Partnership intended to contribute to this goal. Referring back to the ToC-outcomes, these include increasing the faculty's economic research skills and output (presentations, publications) expanding curriculum (new and revised courses), providing outreach (external requests for policy research) and developing the IT needed to support (statistical packages available and integrated into courses, additional on-line classes) and market new capacities (increased visibility of research output).

## **1. Faculty Development-Goal: Increased Human Capacity in Research and Instruction**

The activities to support economic research skills include a series of faculty training programs at FEPS, a joint research program, workshops and informal faculty conferencing.

### **A. Short Courses at FEPS**

#### Activity:

AYSPS faculty at FEPS in Cairo, Egypt delivered four short courses. Sixty four percent of the participation in these courses was from FEPS faculty and staff. The courses were between 10 and 5 days long and were on the following topics:

- Experimental Research Methods 3/9/09-4/9/09. The course enrolled 30 participants, 16 of which were FEPS faculty or staff.
- Advanced Econometrics 11/15/09-11/26/09. The course enrolled 30 participants, 27 of which were FEPS faculty or staff.
- Public Economics 1/15/12-1/19/12. The course enrolled 19 participants, 13 of which were FEPS faculty or staff
- Advanced Econometrics: 1/21/12-2/26/12. The course enrolled 31 participants, 28 of which were FEPS faculty or staff.

Thirty-six percent of the attendees for the short courses were non-FEPS faculty/staff. The opportunity for non-FEPS to attend sets the stage for FEPS to be regarded as a center for advanced training in economic research skills and policy analysis.

#### Outcomes

These topics were identified by the faculty as being areas of need. Training courses exposed participants to new knowledge areas, research skills and increased interest in applying the new skills.

The Financial and Public Economics short training courses solicited qualitative evaluation. Participants assessed the efficacy and benefits of their experiences in the training courses. The following is an assessment of the activity based on unstructured feedback from the participants collected by FEPS staff and in-country interviews conducted by the evaluator.

- **Public Economics:** Participants reported satisfaction with the professional usefulness and pedagogical approach of the course. Eighty five percent of the

respondents indicated overall satisfaction with the workshop<sup>3</sup>. Several participants also reported that the exposure to new skills and knowledge made them feel more connected to the wider discussions in economics and public policy.

*"the training gave me an excellent basic overview with enough specifics that would direct me to more in-depth information"*

*"...an excellent opportunity to have exposure to other international universities, really makes me feel that I am in the other world"*

Concerns raised in the evaluations centered on not having sufficient background to keep up with the lecture, an interest in Egyptian examples of key concepts and the incorporation of 'expenditure' side of public economics.

*"I would have hoped for examination of expenditure issues along side of taxation"*

*"..some papers about the Egyptian system would have made the course more*

*the course was more beneficial for those who have a solid background in public finance, so I missed some parts"*

- **Financial Economics:** Participants reported 100 percent satisfaction with the professional usefulness and the pedagogical approach of the course<sup>4</sup>

*"well organized, content was very good,*

*.."presented a complicated subject in a very interesting way"*

*"..covered very important econometric models in a very good and simple way"*

*"the content was good and the applications very helpful"*

### Implementation Assessment

These courses addressed the reported interests of faculty and staff. The training courses were short but exposed a significant percentage of FEPS faculty and staff to new skills and a glimpse of areas of growth in economics that draw upon quantitative skills. There was some concern expressed that the course design assumed a higher level of skill than the individuals had and that the participants would have benefited from a course that was longer than 5 days (Appendix B). In the case of experimental economics, the course catalyzed an interest that led to an experimental lab being set up and a joint research project between AYSPS and FEPS. This is a good example of a partnership activity contributing to increased human capacity – the faculty member developing a sufficient level of expertise to

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<sup>3</sup> Key words indicating at least satisfaction were identified in the individual responses. The number of responses indicating satisfaction was then divided by total responses.

<sup>4</sup> The same procedure for calculating satisfaction in the public economics course was used in the survey for financial economics.

integrating a new area of economic analysis into a class and institutional capacity – the addition of a lab to facilitate teaching and research.

**B. Faculty Exchanges: Goal: increased human capacity and institutional capacity in the long run.**

The outcomes of these exchanges included enhanced research skills through joint projects, short courses and informal conferencing with colleagues. These outcomes can be measured through the number of research presentations, papers, publications, revised curricula and active Centers for policy research.

**Research**

Activities

Seven faculty members from FEPS traveled to AYPSP in 2011. They participated in joint research projects with AYSPS colleagues, attended 2 short courses, conferenced about course development and accessed electronic library resources. Six of the seven participants stayed for 3 weeks and one stayed at AYSPS for 3 months. The original project document proposed that four FEPS faculty visit AYSPS for three months during the second and third year of the collaboration. This arrangement was changed to allow more participation from the FEPS faculty.

Outcomes

Joint Research Papers

- Prof. Lobna Latif (FEPS), Prof. Musharraf Cyan (AYSPS), Prof Jorge Martinez-Vasquez (AYSPS) “Is Fiscal Decentralization Harmful to Business Climate?”
- Prof. Mary Beth Walker (AYSPS), Prof. May Gadalla (FEPS) “Outcomes-Based Assessment of Supplemental Tutoring in Egypt: Evidence from the Egypt Labor Market Panel Survey”
- Prof. Manal Metwally (FEPS), Prof. Andrew Feltenstein (AYSPS), Prof. Jeffery Condon (AYSPS) and Prof. Nour Razzak (Chicago University) “Macroeconomic Policies and Growth in Egypt: Policy Options”
- Prof. Sally Wallace (AYSPS), Vjollca Sadiraj (AYSPS), Ackaramongkolrotn (AYSPS), and Sarah Mansour (FEPS) “ Tax Compliance and Trust in Post-Revolutionary Egypt”

Seminar Presentations at GSU

- Prof. Manal Metwally (FEPS), “Egyptian Economy – Post January 25 – Challenges and Prospects” June , 2011.
- Prof. Lobna Latif (FEPS), Prof. Nagwa Abdelaziz, Prof. Mona Osman, Prof. Hanan Ramadan Nazier, Prof. Amirah Saleh: Panel Discussion, “ Recent Economic and Political Developments in Egypt and Future Prospects”

Summer Courses at GSU. Four FEPS faculty attended 2 short courses at GSU in 2011.

- Public Budgeting and Fiscal Management
- Tax Policy: Fiscal Analysis and Revenue Forecasting.

In addition to self-reporting an increase in skill level, these projects and papers are evidence that the participants in the exchange increased their analytic skills.<sup>5</sup> Four of the participants produced working papers jointly with AYSPS colleagues. Three of these papers were presented at the final Partnership meeting in June 2013. Three FEPS faculty have reported plans to continue their research with their current collaborators. Additionally, FEPS faculty while at AYSPS presented two conference papers. These presentations provided an overview of Egyptian political economy and provided an opportunity for the larger GSU community to learn about Egypt.

To date, no research papers have been published in either a peer-reviewed journal nor presentations made outside of the FEPS/AYSPS community.

#### Implementation Assessment:

Several FEPS participants reported that one month in residence at AYSPS was too short of time to meet their professional development objectives. It was difficult for them to meet with colleagues during the summer months and to participate in graduate level courses. The more long-term benefits will likely accrue to those participants who have on-going research collaborations. The time in residence provided them with an opportunity to solidify this relationship making it more likely that it will be sustainable over time.

There was strong acclaim for access to the GSU library for this allowed visiting faculty the ability to do a through review of the most recent literature in their field. Access to the GSU library for several months after the exchange was regarded by participants as critical for further academic development in their area of specialty.

### **Curriculum development**

#### Activities

- Two meetings between FEPS faculty and AYSPS reported held in August 2011 to discuss syllabi and textbooks to enhance FEPS graduate courses in public finance and macroeconomics.

#### Outcomes:

- One new course planned: Fiscal Policy and Taxation
- One course revision planned: Financial Economics with monetary policy component.

The project documents refer to a stated need of FEPS to ‘upgrade graduate level courses.... The expected outputs would be upgraded syllabi, reading lists and evaluation instruments’ (AYSPS, *Egypt: Enhancing Capacity for Research in Economics*, Project proposal June 2008 p.9). There have been limited curricular-based direct outcomes linked to the FEPS visit to AYSPS. Although curriculum

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<sup>5</sup> Increased skill levels were reported in interviews with participants and in the survey responses, appendix B –*Exchange Participants*

development was a major component of the collaboration in the original proposal, it has diminished in importance in actual activities.

There are some indirect outcomes from the faculty exchange that should be noted. Enhancing research skills and activity may have important spillovers into the classroom. Faculty usually have part of their teaching load in their area of expertise. As their research skill expand, they will likely incorporate that new expertise in their courses.

### Implementation Assessment

There were few activities during the Partnership that specifically addressed curriculum development. The faculty exchanges facilitated access to new texts, current literature in the fields and to AYSPS faculty syllabi. FEPS faculty reported that this was helpful and provided them with the confidence to design new classes. Additionally, FEPS faculty were exposed to different ways of teaching, especially observing/experiencing moving from theory to praxis. Several FEPS faculty reported that this was helpful in advancing their pedagogical skills. Graduate students remarked on how impressive it was to see their faculty, many mid-career and senior faculty, commit to continuous learning through the FEPS/AYSPS collaboration<sup>6</sup>.

### **Outreach and Policy Expertise:** Development of Center for Economic and Financial Research and Studies

One of the goals of the Partnership is for FEPS to be regarded as a center for policy expertise. The main outreach mechanism for FEPS is the Center for Economic and Financial Research and Studies (CEFRS). The objective of the CEFRS is to:

- Undertake economic studies and policy papers
- Design and conduct training programs in economic and financial fields to develop specialized technical skills for students and practitioners in social science.
- Contribute to the public debate on current important economic issues.<sup>7</sup>

### Activities:

The activities that support increased human and institutional capacity such as short courses, workshops, and visits to GSU for research collaboration would also be activities that would deepen CEFRS outreach capacity. As the FEPS faculty are able to demonstrate an expertise in the quantitative methods for public policy analyses, through publication, workshops and trainings, and consultancies, the more recognition the Center will get as a 'source of expertise'. Additionally, while at GSU,

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<sup>6</sup> Recognition of senior faculty's 'continuous improvement' was relayed during in-country interviews with FEPS graduate assistants.

<sup>7</sup> From the CU-FEPS website 9/2013.

a senior faculty member from FEPS with leadership responsibility for CEFRS, engaged in conversations with AYSPS faculty on ways to further develop the Center.

Outcomes:

It was anticipated that during the faculty exchange program FEPS faculty would:

1. Enhance their economic analysis skills to be able to provide technical assistance and training to clients and,
2. Work with AYSPS faculty and administrators to devise a strategy for the Center to become self-supporting.

Implementation Assessment:

Increased visibility of the FEPS faculty will contribute to the demand for the Center's services and the ability to obtain funding. The enhanced demand for the Center's services is predicated on developing a reputation for being on the cutting edge in economic analysis. While the faculty that participated in the trainings and joint research projects at AYSPS increased their knowledge and analytical skills, it is likely that an impact on demand will be only seen in the long run as the reputational effects mature. Publication of journal articles and presentations at regional and international conferences will contribute to the Center's reputation.

There is no evidence that activities specifically related to sustainable management of the Center were undertaken.

**2. Information Technology:**

The goals of information technology development were multifold. They include:

- Increasing the recognition of FEPS as a source of policy expertise
- Facilitating advanced research capabilities and new areas of expertise in faculty and students through access to statistical packages and modeling capabilities.
- Supporting FEPS as a provider of on-line curriculum.

Activities

- Website Development
- STRATA licenses obtained.
- An experimental lab established
- Distance learning documentation and course development services

Outcomes:

The Social Science Computing Department at FEPS (SSCD) provides structural support to research, teaching and outreach. The development of a website began in 1996. In 2010, the SSCD in collaboration with staff at GSU, redesigned the FEPS website to enhance presentation, ease navigation and increase the repository capability. The website serves as the repository for FEPS publications, teaching materials, events and information about the Centers and as such, is an important vehicle for outreach.

The STATA software was installed and faculty were provided with training. The Partnership did provide assistance in securing 30 STATA licenses which will support the econometric modeling and analysis for the faculty and staff.

The infrastructure and software for the experiential lab were installed and the faculty and staff were provided with training. This lab, dedicated to experimental economics was equipped to facilitate on-going faculty research and student learning.

To enhance distance learning, SSCD developed materials to facilitate faculty's use of MOODLE, an on-line platform for distance learning that is in the public domain. Twelve courses are currently on-line. Eight more are needed to meet the objective of 15% of FEPS courses on line<sup>8</sup>. Increasing faculty competency with Moodle will allow FEPS to reach a broad audience including non-traditional students.

#### Implementation Assessment:

There were communication problems between GSU and SSCD that encumbered the timely completion of the web design. Approximately 90% of the new site was on-line before the Partnership but the remaining 10% took an extended period because of delays in responding to SSCD<sup>9</sup>.

There are not many recent publications listed on the website. From discussions with SSCD staff this is in part because the researchers not offering to put their papers on line<sup>10</sup>.

It has been difficult to access the website in the last few months. This may be due to broken links associated with the recent political and economic challenges.

### **3. FEPS Student Admission to AYSPS**

Referring back to the ToC, the completion of a Master's degree by a FEPS staff will enhance human capacity through the individual's acquisition of skills and knowledge and institutional capacity by deepening FEPS teaching and research faculty.

#### Activities:

One FEPS student was admitted to the AYSPS 1/11 to undertake a Master's in Public Policy. This program has a different in focus and content than the FEPS Master's in Public Administration. The AYSPS program includes the following courses, which are currently not part of the FEPS MA curriculum:

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<sup>8</sup> Communicated to me by Dr. Ahmed Okasa, Social Science Computing Department – FEPS.

<sup>9</sup> It was conveyed to the evaluator that it was difficult to get a timely response from GSU concerning design recommendations for the website. Communicated to me by Dr. Ahmed Okasa, Social Science Computing Department – FEPS.

<sup>10</sup> Communicated to me from SSCD staff.

- Applied research methods and statistics 1&2
- Evaluation research
- Applied microeconomics
- Macroeconomic analysis
- Economics of the public sector
- International public economics
- Public finance and budgeting

Outcomes:

This student completed the MA program in 5/13 and is schedule to begin the doctoral program in Public Policy at AYSPS in the fall 2013. The student received financial assistance from AYSPS-GSU in the form of tuition waivers and graduate assistantships during his MA program and will receive a tuition waiver and a graduate assistantship to complete his doctoral studies from AYSPS-GSU 2013-2017.

Implementation Assessment:

The purpose of this exchange was to train future faculty members in areas seen to be critical to enhance education, research and outreach, but not yet available at FEPS.

The student was attracted to this program because it has a strong curriculum in quantitative analysis and economics. The student reports that he took every quantitative course available and became proficient in SPSS, STATA, and R statistical packages. The student has rated the strength of the academic program and the quality of the mentoring at AYPS-GSU as good.

The MA program at AYSPS has enabled the student to participate in a Masters program with a strong focus on economics and the quantitative skills that will add value to FEPS in the future.

One of the serious challenges reported by faculty, students and administrators at FEPS was that there were students who were qualified but unable to attend AYSPS for financial reasons. Although the Partnership covered tuition, most families were unable to fund the cost of living and transportation to the US. This difficulty in finding a student with sufficient financial resources and the challenges of getting appropriate visas, contributed to the need to extend the period of the Partnership. Therefore the design of this student exchange, with a significant financial obligation on the student, may pose a serious constraint for future participation.

FEPS recruits tenure track faculty from their top performing undergraduate students. Once these students graduate they may have the opportunity to become teaching assistants and upon completing the Master's program, lecturers. Students that complete their doctorate with FEPS may then become an assistant professor with FEPS. This in-house nurturing of future faculty underscores the importance of student participation in the AYSPS student exchange. Those who receive 'state of

the art' training as graduate students will be able to infuse new capacity into the curriculum and research agenda over time.

## **V. Sustainability Prospects**

There are several elements of the FEPS-AYSPS partnership that will contribute to the sustainability of partnership and the continuous improvement in human and institutional capacity.

### **Collaborations**

The collaborations sparked the exploration of new areas in economics/public policy and were reinforced through the application of newly acquired analytical skills. The presentations, papers, and the experimental lab, are demonstrations of the application of new skills. There is greater likelihood that once colleagues have been successful in applying new skills that they are more likely to continue to build on that competency. Additionally, the AYSPS research partners have reported interest in furthering their research agenda on Egyptian topics. The interest of both the FEPS and AYSPS collaborators in continuing the work on policy issues in Egypt bodes well for the longevity of the relationship.

Upon completion of the Partnership in June 2013, a MOU was signed between CU-FEPS and GSU-AYSPS to work towards a joint certificate and a joint Masters degree in Economics and Public Policy. These 'next steps' represent a deeper level of commitment between two programs and if well designed academically and financially, these programs will provide strong bonds of commonality. Joint programs will require an integrated program of study between the two institutions and the flow of students both to Egypt and to the US. If AYSPS students have the opportunity to gain some expertise in Egyptian public policy while studying at FEPS, it is more likely that they will develop research interests in Egypt. While FEPS students are at AYSPS, they will not only be exposed to a strong quantitative perspective on public policy analysis but they will be studying with future colleagues and collaborators, creating a web of networking for both current and future scholars. It is this network of colleagues begun by the Partnership that will keep both partners contributing to a more global and inclusive perspective in public policy.

### **Capacity**

Progress towards one of the main goals of the partnership, to increase human and institutional capacity, is enhanced as FEPS students have the opportunity to receive graduate degrees in public policy. Not only does the student enhance their academic skill but also spending several years in a US university, they gain a network of mentors and a future network of professional collaborators. As FEPS faculty are able to maintain and extend this network of colleagues there will likely be more collaborative opportunities both for projects and conferences.

The short courses provided by the Partnership catalyzed an interest in learning about new areas in economics and has led to some curriculum innovations such as a course in experimental economics. A near term continuation of these courses will build competence in these areas and allow FEPS faculty to continue to integrate these skills effectively into their curriculum. Continuous improvement in academic capacity will be more sustainable as FEPS faculty are able to conduct these short courses for both external and internal audiences. The ability of FEPS faculty to offer these short courses will also contribute to the goal of enhancing a reputation for outreach and policy training.

## **VI. Long Term Impact**

The impact of this Partnership in the future will be assessed by examining evidence of increased human capacity through advances in research and instruction and increased institutional capacity through the establishment of FEPS as a hub for policy expertise and a cutting edge curriculum. These accomplishments do not occur in a vacuum. It is important to put into perspective the limits that even a very effective partnership has in influencing this capacity. The skills that the AYSPS partnership has encouraged are a marginal part of the package of skills, knowledge and expertise that go into creating hub for policy analysis. A deep understanding of economic, political and social context and the intuition that comes from a complex understanding of a changing policy environment can't be overlooked. FEPS would benefit in the long term by developing a wide array of expertise including qualitative and quantitative skills, heterodox and neoclassical approaches, and actively draw from other social sciences. Given this caveat, the Partnership has facilitated an important investment in faculty development for both FEPS and AYSPS. The long-term impacts are noted in the ToC as increased capacity in research and instruction, on-going inter-institutional collaborations, curriculum innovations and outreach capabilities. Many of these impacts will take several years and require that a significant proportion of the faculty are included. While having supportive leadership is important in this process, including the faculty and staff in this re-envisioning process will strengthen the impact of the partnership. If there is broad participation the long-term impacts should be:

- Increased research output with strong analytic and modeling skills
- On-going international collaborations
- FEPS faculty providing training sessions for government and NGOs.
- Curriculum for undergraduates and graduates that develops an ability to apply analytical techniques appropriate to the policy/research question and an appreciation of the limitation associated with the behavioral assumptions of neoclassical analysis.
- Student exchange that involves both Egyptian and AYSPS students. This creates professional networks for the next generation of scholars.

All of these outcomes will contribute to the increased capacity of FEPS as a leader in research and teaching and recognition of FEPS as a source of policy expertise.

## VII. Lessons Learned from Partnership

The following lessons emerged from this impact study as ways to strength human and institutional capacity and ensure sustainability of results.<sup>11</sup>

- Encourage joint research projects, which solidify skills and commitment to new knowledge.
- Design partnerships where both institutions have a long-term interest in building a collaborative research agenda. These partnerships are more effective (produce intended outcomes).
- Invest in faculty who will become the teachers/mentors for other faculty and students. Cultivation of indigenous expertise and academic leadership is a key to sustainable outcomes.
- Create incentives to invest in teaching expertise and curriculum development to sustain an innovative, 'state of the art' curriculum.
- Invest in both junior and senior faculty to maximize the impact of current and future networks of knowledge and skills.
- Situate the goal of a partnership within a strategic plan for both partner institutions. This will ensure that the activities of the partnership address the needs of the institutions and that there is a plan for to actively support the goals of the partnership after the end of external funding.
- Encourage annual reports by those involved in the partnership. This will help track successes and ensure activities are in line with the strategic plans.
- Secure broad collegial support from academic units at both partnering institutions as a necessary condition for sustaining the momentum of the partnership.
- Provide the resources necessary for faculty to learn on their own. Access to electronic library sources is essential to staying current in the field.
- Design short-term courses so that there will be a manageable amount of material and be on going to build expertise over time.

## VIII. Recommendations for Continued Capacity Building

- **Development of Centers:** Plan for resources to support a focused cadre of faculty committed to development of policy analysis skills in research, outreach and teaching. These key faculty members can then provide the intellectual leadership for continuous faculty development.
- Additionally, specifically seek expertise in Center development from colleagues at AYSPS and GSU. Develop a strategic plan that includes financial management and marketing. Consult with SSCD.

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<sup>11</sup> These observations are drawn from the Partnership participants and the author's experience of 'best practices' in higher education administration

- **Curriculum Development:** An important catalyst to being able to effectively link theory with praxis in the classroom is the involvement of faculty in outreach. Examples from real policy work encourage critical and multidisciplinary thinking.
- **Research:** Continuous faculty engagement and development will occur by building on faculty's' understanding of the policy environment in Egypt. Workshops on key quantitative and qualitative skills and exposure to the new theoretical literature will be important complements.
- Significant time with colleagues at AYSPS will be helpful but continuous access to electronic library resources will be essential. (Ph.Ds.' – have the ability to learn on their own, but need access to latest information, and connection with colleagues).
- **Faculty Development:** FEPS and AYSPS have made a significant investment in the training of the graduate student as future faculty member. For FEPS to internalize the returns to this investment, it will be important to plan for providing resources that will allow new faculty members to reach their potential. This may include investing in library resources, trainings, conferences, international collaborations, and policy outreach.

## Appendix A: Survey Questions

### FEPS to AYSPS Student survey

1. What courses were available as part of your core curriculum at AYPS-GSU that were not part of the Master's program at FEPS-CU?
2. What skills and knowledge did you acquire as part of your Master's training that is not available to FEPS-CU?
3. How would you evaluate the strength of your academic program at AYPS-GSU?

outstanding	good	Adequate	poor
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4. How would you evaluate the mentoring that you received at AYPS-GSU?

outstanding	good	Adequate	poor
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5. What logistical challenges did you face in :
  - Preparing to enter the graduate program at GSU
  - Living in Atlanta?
6. How were these challenges overcome?

### Administrator's Questions CU-FEPS

#### Needs assessment:

1. How were decisions made about the design of the collaboration with GSU?
2. How were the topics of the short courses determined? How did these choices fit in with the expressed needs of FEPS to fulfill FEPS strategic objectives?

#### Sustainability

3. Was there sufficient faculty participation at CU-FEPS to:
  - i. Maintain and develop the research and policy analysis components that evolved from the GSU-CU partnership?
  - ii. Develop and maintain a deeper curriculum in new areas of expertise?
4. Will new courses that are resulting from the GSU collaboration be part of degree requirements or be taught on a regular basis?
5. Have the participating faculty expressed confidence to teach in their new areas of expertise?
6. What is the plan by FEPS faculty and administration to continue developing and teaching new course content, institutionalizing research and supporting and monitoring progress in outreach and teaching?
7. How do the activities of the CU-GSU partnership fit into the strategic plan of the FEPS?
8. How many external requests for policy analyses or trainings has FEPS received each year since 2008? How have the number of requests for policy analyses and/or training sessions changed over the last 2 years?
9. What kinds of organizations do you anticipate would seek out the new expertise being developed by FEPS?
10. What specific actions or 'next steps' are necessary to ensure the sustainability of the GSU-CU/FEPS collaboration? Which of these steps are likely to be implemented in the upcoming academic year 2013-2014?

**Workshop participants at FEPS**

*(Questions to be applied to each workshop: financial, public, experimental and econometrics)*

	Financial Economics	Public Economics	Experimental Economics	Econometrics
Which training programs did you participate in?				
Did the workshops offer the skills/knowledge needed to strengthen your research or policy analysis objectives?  If not, what skills or knowledge areas would you recommend?				
Did the workshops offer the skills/knowledge needed to strengthen your teaching responsibilities both with regards to content and pedagogy?				
Upon completion of the workshop did you feel confident to apply the new skills or integrate new knowledge into your research, teaching, or policy analysis  What follow-up activities to the workshop would you recommend?				

5. How do you plan to integrate what you have learned in the workshops to your professional development?

**Exchange Participants FEPS: Research Collaborators**

1. Describe your activities while at GSU. Which of these activities do you think made the most significant contribution to your continuing research agenda? Please explain.
2. How would you rank your contribution in your research collaboration with your GSU colleague with respect to:

	Percent contribution
Problem Identification	
Development of Hypothesis	
Methodology	
Analysis	
Policy implications	
total	100%

3. What specific skills/knowledge have you used from your GSU experience in your joint research project (what is the valued added component that is applied to the joint project?)
4. What activities from the GSU experience have enhanced your teaching portfolio – either pedagogy or content area?
5. Has your participation in summer trainings or your research collaborations at GSU contributed to the development of new courses or the revisions of courses that you will teach in the next 2 years?
6. What topics in your meetings with AY-GSU Center Directors provided the most insight to your work at the Center at FEPS?
7. What resources were available at GSU that facilitated your research or teaching objectives that were not available at your home institution?
8. Did you complete an ‘individual sustainment plan’ as part of your participation in GSU exchange? If so, what do you anticipate being challenges to meeting key elements of your plan?
9. What elements of the collaboration do you think are the most sustainable? Are there recommendations that you would make to enhance that sustainability?
6. What recommendations would you make to the design of the workshops to make them more effective?

### Information Technology - FEPS

1. What were the objectives for website development during the 3 year project with GSU? Of these expectations, which ones were met?
2. What have been the challenges in meeting project objectives?
3. How has the website been designed that furthers the exchange of information about FEPS activities and areas of expertise.
4. How many research papers (working papers, conference papers and publications) have been put on website over the last 3 years (2010-2013)?
5. What instructional materials have been put on website over the last 3 years (2010-2013)?
6. What are the distance learning objectives for the FEPS-GSU collaboration? Which of these objectives have been fulfilled?
7. Has there been monitoring of the numbers of hits the website has received in the last 3 years? If not, are there plans to monitor the use of the website? A

### AYSPS surveys

#### Administrators – GSU

1. How were decisions made about the design of the collaboration with CU-FEPS?
2. How do the activities of the CU-GSU partnership fit into the strategic plan of the AYSP?
3. What specific actions or ‘next steps’ are necessary to ensure the sustainability of the GSU-AYSP/CU-FEPS collaboration? Which of these steps are likely to be implemented in the upcoming academic years 2013-2014 and 2014-2015?

#### Research Collaborators

1. If you have collaborated with a FEPS colleague on a research project, how would you rank your contribution with respect to:

	Percent contribution
Problem Identification	
Development of Hypothesis	
Methodology	
Analysis	
Policy implications	
total	100%

2. How has your experience working on an Egyptian policy issue influenced your long run research agenda?

**Administrators – GSU**

1. How were decisions made about the design of the collaboration with CU-FEPS?
2. How do the activities of the CU-GSU partnership fit into the strategic plan of the AYSP?
3. What specific actions or ‘next steps’ are necessary to ensure the sustainability of the GSU-AYSP/CU-FEPS collaboration? Which of these steps are likely to be implemented in the upcoming academic years 2013-2014 and 2014-2015?

4.

**GSU Faculty**

1. Which short course did you deliver?
2. What were your objectives for the short course?
3. Did you have the opportunity to observe the effectiveness of the training materials in your FEPS colleague’s work (Discussion of a research methodology or course development using new concepts)?
4. Do you think the design of the short courses is sufficient to catalyze growing competency in the area of inquiry?
5. After having the experience of designing and delivering a short course, what recommendations would you make for future short courses at FEPS?
6. If you have collaborated with a FEPS colleague on a research project, how would you rank your contribution with respect to:

	Percent contribution
Problem Identification	
Development of Hypothesis	
Methodology	
Analysis	
Policy implications	
total	100%

7. How has your experience working on an Egyptian policy issue influenced your long run research agenda?

## Appendix B: Survey Responses FEPS-CU

### Student Exchange FEPS to AYSPS

#### 1. What courses were available as part of your core curriculum at AYPS-GSU that were not part of the Master's program at FEPS-CU?

FEPS doesn't have a master of public policy program. It only has a master of public administration program. The later doesn't include any courses on quantitative analysis or economics. Unlike FEPS, the AYS's master program provides strong background on quantities analysis and economics. Fr instance, during my masters, I've taken:

- Applied research methods and statistics I
- Applied research methods and statistics II
- Evaluation Research
- Applied Microeconomics
- Macroeconomics Analysis
- Economics of Public Sector
- International Public Economics
- Public Finance and Budgeting

#### 2. What skills and knowledge did you acquire as part of your Master's training that is not available to FEPS-CU?

Basically research and analytical skills. I took every single quantitative course available in the school including those in the PhD program. I learned how to use statistical packages such as SPSS, STATA, and R.

#### 3. How would you evaluate the strength of your academic program at AYPS-GSU?

<b>Outstanding</b>	<b>Good</b>	<b>adequate</b>	<b>poor</b>
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Good

#### 4. How would you evaluate the mentoring that you received at AYPS-GSU?

<b>Outstanding</b>	<b>good</b>	<b>adequate</b>	<b>poor</b>
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Good

#### 5. What logistical challenges did you face in :

- **Preparing to enter the graduate program at GSU**

The main challenge was that the GSU-CU partnership only covered part of the cost of my program. I have to search for other sources. Another challenge was that the partnership was supposed to be extended before the start of my program.

- **Living in Atlanta?**

I didn't face any challenges with regard to living in Atlanta.

#### 6. How were these challenges overcome?

I provided the rest of the necessary fund from my own money. And I had to put off the start of my program for a whole semester so that USAID and HED had the time to extend the partnership. I was supposed to start in fall 2011. Instead, I started my program in spring 2012.

## **Information Technology**

### **1. What were the objectives for website development during the 3 year project with GSU? Of these expectations, which ones were met?**

The objectives for FEPS website are:

- A. Make a good web site for the FEPS.
- B. Make all data and information available for students, staff and faculty.
- C. Make it easy for all clients
- D. Build a corporate email for all Faculty and students
- E. Develop an e-learning program to initiate a new way of teaching and interaction between students and their professors.
- F. Develop a webpage for each student and each member of the Faculty, this page is fulfilled with all possible services, such as their class, their grades, any forms they need.....

Only A, B and C were met.

### **2. What have been the challenges in meeting project objectives?**

We have two different kinds of challenges: Internal and External

For Internal one, it is difficult to collect data and build stable connections with source of data. Moreover, some of the employees and staff have limited knowledge about the Internet and websites. We face lots of difficulties to deal with them.

For the External one, when we need to discuss some issues related to the design to the website we wait a long time to have a response sometimes this response does not give us complete information about the problem.

### **3. How has the website been designed that furthers the exchange of information about FEPS activities and areas of expertise.**

We developed the first draft of the website we sent it to all departments at FEPS and the students Union to have comments. Then, we took some of the feedback into our considerations. For example, some departments asked us to develop part for conferences.

### **4. How many research papers (working papers, conference papers and publications) have been put on website over the last 3 years (2010-2013)?**

Unfortunately, we do not have all published papers, because some of our faculty members are not interesting to deliver us with the information about their publications. In general, we have about only 80 papers. <http://www.feps.edu.eg/en/reseachlist.php>

### **5. What instructional materials have been put on website over the last 3 years (2010-2013)?**

We put material for the e-learning, how to use the Moodle. Also, material for how to use your email. Guidelines for the website and the Faculty.

### **6. What are the distance learning objectives for the FEPS-GSU collaboration? Which of these objectives have been fulfilled?**

The Objective of e-learning is to develop about 15% of the current courses as e-courses. We already have about 12 courses now. We still need at least 8 more courses. We started this objective just last year 2012-2103

### **7. Has there been monitoring of the numbers of hits the website has received in the last 3 years? If not, are there plans to monitor the use of the website?**

No, but we are planning to do this the near future.

### **Exchange Participants: Research Collaborators**

#### **1. Describe your activities while at GSU. Which of these activities do you think made the most significant contribution to your continuing research agenda? Please explain.**

-Conduct meeting with the professors,

-Prepare the outline for the new paper of “Macroeconomic Policies and Growth in Egypt,

-Visit the library,

-Have the password to have the access to international periodical for research I think each one of them is considered a contributor.

1. attending summer classes
  2. exchange of ideas and discussions with GSU professors
  3. using library facilities
- 2&3 were significant to my continuing research agenda

**Not research Collaborator**

1. Primary purpose of the visit: Enhance our research capability and attend some program such as tax revenue and prediction
2. I Contact with a big professor on my field and discussed the curriculum of different subject which I taught in addition to my research idea.
3. 2- Access to a lot of journal and data.

**2. How would you rank your contribution in your research collaboration with your GSU colleague with respect to:**

	Percent contribution
Problem Identification	10
Development of Hypothesis	15
Methodology	30
Analysis	30
Policy implications	15
total	100%

Problem Identification	5
Development of Hypothesis	10
Methodology	50
Analysis	10
Policy implications	25

**3.What specific skills/knowledge have you used from your GSU experience in your joint research project (what is the valued added component that is applied to the joint project?)**

- Develop the methodology using GEM,
- Provide an opportunity to discuss the required policies according to the experience of other countries and what is the best one for my county Egypt,
- Conducting Joint seminar to discuss the results of the paper.

- Unfortunately I am not do joint research.
- I identified the initial research problem, then all of the contributors developed the idea and framed the hypothesis and identified the methodology. Analysis was shared between contributors by sections, then all contributed to policy implications.

**4. What activities from the GSU experience have enhanced your teaching portfolio – either pedagogy or content area?** To develop the content of the course and to implement a practical part in the course

- *Better framing of research questions*
- *Contact with a big professor in my field and discussed the curriculum of different subject which I taught give me the chance to develop the curriculums of financial economics and monetary policy.*

5. **Has your participation in summer trainings or your research collaborations at GSU contributed to the development of new courses or the revisions of courses that you will teach in the next 2 years?**

Yes I think to provide a new course of Taxation in Post Graduates Studies in FEPS

No.

6. **What topics in your meetings with AY-GSU Center Directors provided the most insight to your work at the Center at FEPS? To discuss the following topics in Egypt:**

- Tax Reform In Egypt
- Budget Deficit and New Tools to Reform,
- The Role of Fiscal Policy in Growth In Egypt.

7. **What resources were available at GSU that facilitated your research or teaching objectives that were not available at your home institution?**

- The access to international periodical and Journals to develop our research,
- The access to new books to be able to develop our courses,
- The ability to have the new software to help us in our econometric work

Library and rich knowledge in my area of research (decentralization)

*Library –experience economic Labe but now we have one in our faculty as a result of the exchange program with GSU.*

8. **Did you complete an ‘individual sustainment plan’ as part of your participation in GSU exchange? If so, what do you anticipate being challenges to meeting key elements of your plan?**

- No
- NO

9. **What elements of the collaboration do you think are the most sustainable? Are there recommendations that you would make to enhance that sustainability?**

To conduct Joint Research and Teach Joint courses .I think we need the following:

- Conduct a jointly planned activity of the new coming cooperation and the time plan
- Determine the Joint team for that cooperation,
- Find the financial resources to implement the plan a good way.

Joint research, finding project opportunities would enhance it

*1- The intent of each part to sustain.*

*2- Create several activities such as joint supervision because this will be benefit to both students and professors from Cairo University.*

## **Survey Responses AYSPS-GSU**

Research Collaborators

**1. If you have collaborated with a FEPS colleague on a research project, how would you rank your contribution with respect to:**

	Percent contribution
Problem Identification	10
Development of Hypothesis	10
Methodology	40
Analysis	20
Policy implications	20
total	100%

**2. How has your experience working on an Egyptian policy issue influenced your long run research agenda?**

I have become quite interested in the issue of promoting growth in Egypt, following the fall of the previous government. Accordingly, I am now working on a new project that is derived from the paper I wrote with my Egyptian colleague, Manal Metwaly. I am also extending the underlying methodology to work on China.

Research Collaborators

**1. If you have collaborated with a FEPS colleague on a research project, how would you rank your contribution with respect to:**

	Percent contribution
Problem Identification	40
Development of Hypothesis	50
Methodology	30
Analysis	50
Policy implications	50
total	100%

**2. How has your experience working on an Egyptian policy issue influenced your long run research agenda?**

I have long been interested in education policy, but have not tackled issues that are international in scope. This work on supplemental tutoring has increased my interest in looking for international data sets. Similarly, this project has made me recognize that there might be an interesting domestic research project due to the rapid expansion of supplemental tutoring in the U.S.

**GSU Faculty**

**1. Which short course did you deliver?**

Public economics

**2. What were your objectives for the short course?**

Provide the class some state of the art empirical work in the context of theoretical issues in graduate public finance.

**3. Did you have the opportunity to observe the effectiveness of the training materials in your FEPS colleague's work (Discussion of a research methodology or course development using new concepts)?**

Yes—I am engaged in an on-going research project with one colleague and there are many intersections of the course, discussions, and her current research project.

**4. Do you think the design of the short courses is sufficient to catalyze growing competency in the area of inquiry?**

It is a good start but should be taken as a starting point. More courses, follow up with assignments, etc. is needed.

5. **After having the experience of designing and delivering a short course, what recommendations would you make for future short courses at FEPS?**

More of them—there is a real hunger for outside research experience.

6. **If you have collaborated with a FEPS colleague on a research project, how would you rank your contribution with respect to:**

	Percent contribution
Problem Identification	10%
Development of Hypothesis	5%
Methodology	40%
Analysis	40%
Policy implications	In progress
total	100%

7. **How has your experience working on an Egyptian policy issue influenced your long run research agenda?**

Yes—we are now engaged in experimental analysis of tax compliance in Egypt—which is a new country of focus. There is very little literature out there.

Administrators – AYSPS

4. **How were decisions made about the design of the collaboration with CU-FEPS?**

n/a

5. **How do the activities of the CU-GSU partnership fit into the strategic plan of the AYSP?**

The AYSPS strategic plan, as well as the GSU strategic plan specifically speaks of international engagement, both in terms of student involvement and research involvement. So the work with the CU – GSU partnership is right in line with our plans for the future.

6. **What specific actions or ‘next steps’ are necessary to ensure the sustainability of the GSU-AYSP/CU-FEPS collaboration? Which of these steps are likely to be implemented in the upcoming academic years 2013-2014 and 2014-2015?**

A clear next step is the completion of the research projects begun with the faculty at FEPS. I would hope that the continuing work on these projects might lead to additional collaborative research. I believe that this work will be implemented over the 2013-2014 academic year.

Looking a little farther ahead, I hope that the AYSPS will be able to host visiting scholars from FEPS. Depending on the availability of future funding, and, frankly, on improved political stability in Egypt, we might also hope to find additional areas for collaboration. Our discussion with faculty at FEPS lead me to believe they had substantial interest in building capacity in public policy and policy analysis.

Administrators – GSU

1. **How were decisions made about the design of the collaboration with CU-FEPS?**

GSU and CU-FEPS have engaged in transparent and meaningful discussions from the very inception of this collaboration. GSU has made every effort to be flexible to the needs of CU-FEPS while keeping in compliance with USAID/HED rules and making sure that the fundamental objectives of the program were met. The initial period of the project required some adjustment because CU-FEPS went through leadership changes and priorities were re-assessed. The proposal went through several amendments in the first year and this was a learning process for all involved in the activity, including HED but we established a communication protocol after which things ran more smoothly. The technical activities and financial priorities were revisited and revised on several occasions to best meet the objectives of the collaboration and requests made by CU-FEPS. Based on needs expressed by CU-FEPS, additional training programs and visiting scholars were added amongst other activities. Many of these activities had been included in the initial proposal, taken out and put back in based on CU-FEPS requests. Budget modifications were limited to once in 6 months after the first year of the project, which led to smoother functioning of the collaboration. In retrospect clear lines of communication and a protocol regarding modifications for such partnerships should be set early on and it would probably be best if HED/USAID set the tone for that. Despite the initial learning curve GSU and CU-FEPS have established a wonderful relationship and activities such as the, "Tax Experiment" implemented by GSU at the CU campus in 2013 developed organically as a result of the research collaborations between colleagues across the two campuses.

**2. How do the activities of the CU-GSU partnership fit into the strategic plan of the AYSP?**

The vision statement of AYSPS is, "Changing the world: One Student at a time, One Idea at a Time" and the mission is to, "strengthen communities across the globe through policy research, scholarship, public engagement and the development of leaders" The CU-GSU partnerships fits ideally with both the vision and mission laid out in the AYSPS strategic plan. As a result of this partnership, Mahmoud Abduh Ali Elsayed, a student from CU was partially funded to attend the Master's in Public Policy program at AYSPS. He completed his Masters and has now been accepted and enrolled into the PhD program at AYSPS. GSU faculty has delivered several training programs at CU over the course of the partnership. The participants have included graduate students and faculty and the training programs have been comprised of several topics such as experimental economics, financial econometrics and public finance. These training programs have sparked new research ideas and interests both at CU and GSU, leading to the first ever tax experiment implemented at CU. This is cutting edge Economics and it has been a matter of pride for us to be able to expose its elements to our colleagues at CU and an honor to be able to implement the tax experiment at the CU campus. CU faculty visited AYSPS and delivered seminars about the current economic status of Egypt and what lies ahead. Faculty from all around the GSU campus attended such talks and felt fortunate to be able to hear first hand accounts about the current situation in Cairo. Three research collaborations between GSU and CU faculty have resulted in three papers, which we will soon hope to publish. These papers were jointly presented at CU to the local faculty and donor community including USAID. It is precisely this idea exchange and collaboration that we strive for at AYSPS. The presence of the CU faculty and students on our campus has, "enhanced the international experience of our students". Since many of our CU faculty work closely with the government, we have indirectly "Supported public policy and community leaders international levels

through our academic, research, and technical assistance activities.” as a result of this collaboration. In addition to the sub goals of the AYSPS strategic plan included above the AYSPS is committed to international engagement, which is a key element of our collaboration with CU.

**3. What specific actions or ‘next steps’ are necessary to ensure the sustainability of the GSU-AYSP/CU-FEPS collaboration? Which of these steps are likely to be implemented in the upcoming academic years 2013-2014 and 2014-2015?**

We will complete all project objectives, as planned by August 30th, 2013. The cross campus research collaborations that have been developed as a result of this project will hopefully continue to grow and we will try our best to provide a conducive environment and encouragement for this. But this is primarily driven by the commonality of research agendas between faculty at the two different campuses and is a process that cannot be mandated. We are however hopeful and feel very positively about continued research collaboration between CU and GSU faculty.

As for specific steps and timelines, it is very hard to say anything at this point, especially given no additional funding and the political situation in Egypt. We will explore opportunities with our colleagues at CU to garner additional funding for joint research projects in the future and hopefully have the option of engaging in a structured program again.

**Research Collaborators**

**1. If you have collaborated with a FEPS colleague on a research project, how would you rank your contribution with respect to:**

	Percent contribution
Problem Identification	33
Development of Hypothesis	33
Methodology	33
Analysis	33
Policy implications	33
total	33%

**How has your experience working on an Egyptian policy issue influenced your long run research agenda?**

I have done prior research on Egypt’s policy issues and it is satisfying to me to have completed this study with an Egyptian scholar as a coauthor. The paper fits rather well in my longer terms agenda for understanding the impact of fiscal decentralization reforms on economic development and growth

## Workshop participants at FEPS

(Questions to be applied to each workshop: financial, public, experimental and econometrics)

	Financial Economics	Public Economics
<p>Did the workshops offer the skills/knowledge needed to strengthen your research or policy analysis objectives?</p> <p>If not, what skills or knowledge areas would you recommend?</p>	<ol style="list-style-type: none"> <li>1. Yes, The course is interested in using advance Econometric Tools in Finance</li> <li>2. Definitely. However, due to time limitations, there were more topics that were not taught and we discussed with the Professors coming back for another workshop to cover those topics.</li> <li>3. Yes, it was beneficial and interesting</li> <li>4. yes</li> </ol>	<ol style="list-style-type: none"> <li>1. Yes, It help me to be able to use Household Survey in Tax analysis</li> <li>2. Definitely. However, due to time limitations, there were more topics that were not taught and we discussed with the Professors coming back for another workshop to cover those topics.</li> <li>3. yes</li> </ol>
<p>Did the workshops offer the skills/knowledge needed to strengthen your teaching responsibilities both with regards to content and pedagogy?</p>	<ol style="list-style-type: none"> <li>1. This help me in my teaching the course of Advance Macro .It help me to develop the part that related to Monetary policy .</li> <li>2. Yes</li> <li>3. Yes, the instructor was excellent.</li> <li>4. yes</li> </ol>	<ol style="list-style-type: none"> <li>1. Yes I teach the course of public finance in and this help me to develop the content and to add a practical part to the course</li> <li>2. Yes</li> <li>3. yes</li> </ol>
<p>Upon completion of the workshop did you feel confident to apply the new skills or integrate new knowledge into your research, teaching, or policy analysis</p> <p>What follow-up activities to the workshop would you recommend?</p>	<ol style="list-style-type: none"> <li>1. We need to: -Conduct Joint research in this area and publish the papers in International Journals -Invite Professors from Georgia to participate in teaching this course to students -Give the opportunity to the staff of faculty to attend a long time in Georgia to develop their courses</li> <li>2. Yes Not very much. It was too short to be able to apply the new skills or integrate into my research and</li> </ol>	<ol style="list-style-type: none"> <li>1. It help me to implement the new skills in my paper of Tax Reform in Egypt We need to: -Conduct Joint research in this area and publish the papers in International Journals -Invite Professors from Georgia to participate in teaching this course to students -Give the opportunity to the staff of faculty to attend a long time in Georgia to develop</li> </ol>

	<p>teaching. I think it is important to have two things:</p> <ul style="list-style-type: none"> <li>- First, a second round of the workshop where we can have more applications.</li> <li>3. - Second, projects and co-publications with our colleagues from the other university in order to apply these new techniques.</li> <li>4. Yes, Joint Research projects and other related topics workshops</li> </ul>	<p>their courses.</p> <ul style="list-style-type: none"> <li>2. Yes</li> <li>3. Yes, Joint Research projects and other related topics workshops</li> </ul>
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5. How do you plan to integrate what you have learned in the workshops to your professional development?

1. Develop the content of the course –Use a practical part in the course and give the students the opportunity to implement this in their research .
2. **First**, I am planning to integrate the skills I have learnt in the courses I will be teaching. **Second**, I have already started applying them in my research and the paper I am currently working on jointly with two Professors from GSU (Sally Wallace and Vjollca Sadiraj).

3. I have already used some of these techniques in one of my courses on international trade.

6. What recommendations would you make to the design of the workshops to make them more effective?

1. Give the participants the opportunity and time to implement the tools and the new skills in the workshop and the results will be discussed with the professor. This will enrich the benefits from the workshop
2. As mentioned above, more efforts should be deployed at the capacity building level. I suggest three things:
  - First, a second round of the workshop where we can have more applications for our specific research projects.
  - Second, projects and co-publications with our colleagues from the other university in order to apply these new techniques.
  - Third, organize joint seminars or conferences to present the findings of these co-publications to get a constructive feedback on our research.

They were already effective as the morning sessions were devoted to the theory.

## Appendix C: Short Course Evaluations

Public Economics:

Financial Economics

Feedback was coded according to response. Yellow represents positive feedback about the participants experience with the course. The blue represents a suggestion for improvement or a critique. Percent satisfaction was calculated positive response/total responses.

1. According the course of public economics it was the same as it was **very beneficial**, but I **could not catch a lot of things as** i did not have much more background about the public finance issues. The **lab was good** as I knew from the data we used the shape of household surveys and micro data
2. The training was a **useful chance for enhancing my educational skills** and I hope to have another chance for future courses and if we can have any chance for outreach or a communication online channel.
3. The **course was really beneficial**, it gave us a lot of **valuable information** and the link between the theoretical and applied parts was very interesting. I personally enjoyed listening to Professor Wallace and I hope we would be able to take further interesting courses with her.
4. The course was **very useful**
5. It was a **very useful** course by a very sweet lecturer. So happy to have taken part in it.
6. This training gave me an **excellent basic overview** with enough specifics that would direct me where to go for more in-depth information.
7. I really had **benefited very** much from all the presented sessions: dr. Sally is very professional in teaching, she has a **clear and understandable language**, and uses **different methods for stimulating the participants to be interactive**. For the topics covered by the course, they were chosen very carefully as a base for understanding the relevant issues.
8. I just hope that if "expenditure issues" were examined along with those related to taxation. I know that the course entitled "Public Economics", and its focus is on "tax burden", but as a way of improving this course content, and because tax policies can't be isolated from expenditure policies, I suggest -if possible- to cover the expenditure side, with the taxation side, **to provide a comprehensive view of all topics related to "public economics"**. Another point, I hoped if the sessions were organized by topics, for each one **concentrating on a specific issue, as what happened was that all topics were discussed during all sessions, with a little organization of the sequencing**.
9. But anyway, i had to say that i view this course **as very successful** (compared to other previous ones), in **terms of value added**, **teaching methods** used by the Prof., and **topics** discussed.
10. First, it is an excellent opportunity to have **exposure to other universal** universities, really it makes me feel **that I am in other world**. Thanks for all who organized this program. For my opinion, **the course was very good**.
11. I like papers, organized timetable between papers and days, the **interactions between different mind in class** as well as **the case study of Pakistan**, and how important the details of data, how to get data from surveys, what type of data needed to be publicly released for the purpose of disclosure and research.
12. It makes me feel how we **are far from other countries in data, systems even in way of teaching**. Personally: Sally is very helpful and kind

13. I think, it's better that lecturer have been read some papers about the Egyptian system so the course might be more valuable, which means choosing some literature or theory related to us. ( I don't know whether this is applicable or no?).
14. I think the course was more beneficial for those have solid background in public finance, so I missed some parts, but in general it opened my mind to different issues.

Positive responses =  $12/14 = 85\%$

### Course Feedback : Financial economics

1. The course was very well organized and helpful for me. But it could be better to make a beginner level from this course for those who forgot econometrics studied in the faculty. The content of the course was very good and the application was very helpful but we needed more applications on R program and more exercises on it.
2. I found the course very helpful but I suggest to make other courses for beginners in Financial Econometrics and make other courses on mathematical economics. I have one more suggestion is to try to make a course on mathematical economics or statistics for who are interested in those two fields.
3. I was impressed by the course. Dr. Luger had presented a complicated subject in a very interesting way. He was very informative and very helpful. I am grateful to this course which allowed me to get new knowledge in a quite well structured form.
4. The Financial Econometric course held by the faculty was very beneficial. It covered very important Econometric models. The instructor, Richard, delivered the info. in a very good and simple way. He is an expert in his field. I wish he can teach us more courses, and to also benefit the undergraduates by giving them the basic Econometric course in the third year.
5. The course went very good, it was fruitful for me to know something about time series financial models (AR, ARMA, ARCH, GARCH) as i have not heard about them before, it was organized well, and it is experience for me to take a course by foreign professor. But I want to learn more about R. my impression is good about the course and i hope to repeat these courses more and more
6. I think the course was perfect, its main goal was achieved and I would like to mention the outstanding performance of Dr. Richard in explaining the tiny details and answering every question asked to him. I would like to have other courses in econometrics in future courses.
7. The financial econometrics course was very useful. It was very well organized. Although 5 days is not enough of course to cover a big topic like this, but he put us on the right track. I believe Professor Luger liked Egypt and the whole audience (he was very happy from our questions and realized we are serious students), so we could ask him to come again with more on financial econometrics like 'Bayesian econometrics, VAR, ...', he can suggest any topic and I am sure we'll benefit a lot from more in depth analysis. Hope we can arrange more of these courses in the future
8. the course went very well, i would rank the course as 4.5 out of 5 (if we are to rank it)
  - a. the program was really good as:
  - b. -it was well organized.
  - c. -the materials covered both the theoretical background and the practical examples needed.

- i. the professor (Dr. Richard Lugar) was experienced enough to over the underlying subject efficiently.
- d. there were some administrative drawbacks such as:
  - i. Sometimes, we used to face technical problems.
- e. All in all, i am really impressed with the course and hope that you could keep it up.
- f. The course was outstanding & the lecturer was so excellent. But the time span of the course (5 days only) is too short

8/8 = 100%

## Appendix D: Scope of Work



### Evaluation Specialist for a Sustainability and Strategic Impact Assessment

#### Summary of Job

HED is seeking qualified candidates to develop the methodology and carry out data collection, facilitate sustainability strategy sessions with the partners and stakeholders, and author the report to include findings, conclusions and recommendations. A field visit to Egypt will be required.

#### About HED

HED receives funding from USAID's Bureau for Economic Growth, Education and Environment, Office of Education (E3/ED), USAID's International Bureau for Worldwide Missions, and the U.S. Department of State to support higher education partnerships to advance global development, economic growth, good governance, and healthy societies. These partnerships provide training, applied research, academic program development, program evaluation, policy analysis, and program implementation, which are critical to furthering the U.S. Government's (USG) foreign assistance goals.

For more information on Higher Education for Development, please visit [www.hedprogram.org](http://www.hedprogram.org).

For information on USAID and its role in economic and humanitarian assistance worldwide over the past 50 years, please visit [www.usaid.gov](http://www.usaid.gov).

#### About the Partnership

As Egypt's premier public higher education institution, Cairo University provides economic education and research through the Department of Economics' Faculty of Economics and Political Science (OE - FEPS). Established in 1960, it is widely recognized for the success of its graduates and its research productivity. The DOE-FEPS provides a foundation for economics education and service as a national resource in economics research.

USAID/Egypt identified a substantial need for high quality economics research for a variety of stakeholders including international academic networks, multinational development agencies, the Egyptian media, private sector businesses and industries, and government policy makers. Recognizing the importance of economics education and research, USAID/Egypt is supporting the Cairo University DOE-FEPS' efforts to strengthen its academic programs and to contribute to Egypt's economic development through a partnership with Cairo University's Andrew Young School of Policy Studies (AYSPS).

The purpose of this higher education partnership is to expand the capacity of the faculty in economics research and strengthen Cairo University's ability to serve as a national hub for teaching, research and service in economics and economic policy development.

May 20, 2013 - 1

The partnership's objectives are to:

- Strengthen the academic capacity of DOE-FEPS;
- Strengthen the outreach capacity of DOE-FEPS;
- Strengthen the applied research capacity of DOE-FEPS in order to engage in the support of better informed decisions and policy making;
- Create an international network of experts in support of Egypt's public policy reform; and
- Integrate appropriate information technology and distance learning techniques into the academic and outreach components of this project.

#### **Objective of the Assessment**

The purpose of this study is to:

1. Utilize existing M&E documentation to articulate the partnership's theory of change around which the assessment methodology will be developed
2. Use the reconstructed theory of change to assess the partnership contributions to outcome level change and document lessons learned from implementation
3. Provide recommendations to partnership institutions, HED and USAID on strategies and specific actions to ensure sustainable achievement of long-term objectives.

#### **Scope of Work**

To meet the objectives, the Specialist will undertake the following activities:

##### *Activities related to Objective 1*

- 1) Reconstruct the partnership's theory of change
- 2) Utilize the partnership's reconstructed theory of change to develop the methodology and procedures by which the sustainability and strategic impact assessment will be undertaken.

##### *Activities related to Objective 2*

- 3) Review the partnership's reported accomplishments and evaluate, quantitatively and qualitatively, its level of performance against objectives as stated in the Associate Award, sub award agreement, work plans, targets, progress reports, stakeholders interviews, and the reconstructed theory of change.
- 4) Assess the effectiveness of partnership management practices, implementation strategy, and implementation challenges and solutions especially in light of political instability, in achieving the following:
  - Quality program services, particularly the quality of courses and training programs, and their alignment with community needs;
  - Effectiveness of institutional development activities;
  - Changes in staff capacity to teach, conduct and implement economic policy research activities; and

May 20, 2013 - 2

- Participation levels and dynamics of local stakeholders supported by this project.

*Activities related to Objective 3*

- 5) Evaluate the effectiveness of the partnership in jointly managing and coordinating the programmatic and administrative aspects of training logistics, research activities, and financial responsibilities.
- 6) Assess the extent to which partnership achievements and outcomes are sustainable and appraise the potential for partnership sustainability after the cessation of HED funding.
- 7) Identify different practices that emerged throughout partnership implementation and identify lessons learned and recommendations for maintaining the sustainability of those new practices.
- 8) Recommend strategies and potential steps to effectively strengthen systems and policies to continue to expand the capacity of DOE-FEPS in economic research, in light of ongoing political instability in Egypt.

**Expected Outputs and Deliverables**

Deliverables will include:

1. ***A theory of change constructed from a review of partnership documentation.***
2. ***An assessment methodology proposal that includes:***
  - Work plan and timeline
  - Methodology and data collection plan
  - Draft data collection tools (questionnaires, interview guides ,list of documents to be consulted, etc.)
  - Plan for structured data analysis and interpretation of findings
3. ***Assessment report that will include the following specific deliverables to be submitted and reviewed by HED at different time intervals:***
  - Report outline specifying structure of the report to include, at a minimum:
    - Methodology and data collection process
    - Theory of change (*objective 1*)
    - Partnership performance assessment (*objective 2*)
    - Partnership contributions to outcome level change (*objective 2*)
    - Lessons learned from partnership implementation (*objective 3*)
    - Sustainability prospects and strategies for long term impact (*objective 3*)
    - Recommendations for continued capacity building (*objective 3*)
    - Conclusions
  - Complete draft of the assessment report
  - Final assessment report in MS Word format. Three hard copies and one electronic copy including all materials used in the assessment process.
4. ***Dissemination plan***
  - Recommended list of individuals, organizations and mailing lists through which the report can be disseminated by HED.

Schedule and deliverables will be finalized in close consultation and coordination with HED, AYSPS, and DOE-FEPS.

**Duration of Assignment**

Selection of the Evaluation Specialist will be made no later than May 15, 2013, and the assessment will begin immediately thereafter. All field work should be completed no later than July 8, 2013. HED requests that the Specialist attend a final partnership seminar in Cairo during the week of June 24. Other activities, including the submission of all deliverables, should be completed no later than September 15, 2013. HED expects the Evaluation Specialist to spend a total of no more than 28 working days on this assignment including up to 10 days of field work.

**Experience and Requirements**

- Advanced degree (Master's or above) or equivalent in development, economics or in a field related to an area of expertise required for evaluations (e.g. quantitative and qualitative research, monitoring & evaluation);
- Significant knowledge of higher education, international development field work, evaluation designs and work plans, evaluation interviews, and interpreting quantitative data collection and analysis process.
- Minimum of five years' experience in monitoring and evaluation of development activities;
- Demonstrated experience with and understanding of monitoring and evaluation of economic research and economic policy development;
- Excellent oral and written communication skills in English, and ability to conduct interviews. Fluency in Arabic is desirable.
- Experience interacting with developing country governments, bilateral donors, civil society representatives, and senior level academic and government officials;
- Ability to work with diverse international teams and excellent interpersonal skills.
- Experience working on USAID projects and evaluation projects
- Experience working in the Middle East, preferably in Egypt

**Appendix C: FEPS Website Homepage & Deans' Welcome**

**NEWS**



**Midterm Exam Result**

Applied Statistics for Political Science Students Midterm Exam Result is already on the website [more](#)



**Important For Second Year - Political Science-English**

Second Year-Political Science-English Midterm Exam Scores For Research Methodology are already uploaded, check your score.... [more](#)



**Announcement**

Parc announces that there are jobs available for students [more](#)



**Announcement**

UNDERGRADUATE SCHOLARSHIP AT THE UNIVERSITY OF CHICAGO Information Session on Tuesday 3 December 2013 [more](#)



**Announcement**

ROME MODEL UNITED NATIONS 13-17-2014 [more](#)



**4th Year P.S subscription page with supervisors**

4th Year P.S.subscription page with supervisors will be open tomorrow 05/11/2013 at 1:00 pm [more](#)



**P.Science Projects Supervisors**

The Final List of Professors who will Supervise on Fourth Year Political Science Projects.. [more](#)

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**EVENTS**

**Graduation Cermony**

The Faculty of Economics and Political Science celebrates annually the graduates day to honor its graduates, and to display pictures of the graduates day during the previous years To get more information about.....

[More](#)

**Excellence Day**

The Faculty of Economics and Political Science celebrates an annual day of excellence and to honor their sons and thoughtful students who have achieved success in various fields, as well as honoring faculty members.....

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**Employment Fair**

From recognizing the need to integrate academic and practical experience, the Faculty of Economics and Political Science arrange summer training and considers it a vital task. So, the employment fair is organized.....

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**Special Events**

Under the auspices of Dr. Hossam Kamel, President of Cairo University and Dr Hala El Said, the faculty dean, the Faculty of Economics and Political Science organized a Ceremonial of credit, on the occasion of receiving a certificate of quality from the National Authority for Quality Assurance & Accreditation of Education. The overall .....

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**GSU ( AYSPS ) & FEPS Conference**

Partnership Concluding Conference: ."Enhancing Capacity for Research in Economics" Tuesday, 25 June 2013

between Georgia State University (The Andrew Young School of Policy Studies) and FEPS

[More](#)



Excellence Day

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**Spotlights**

National Authority for Quality Assurance and Accreditation of Education Certificate

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Moodle is a program which will allow the faculty to take there Classes Online ,WITHOUT any Need For any programming language knowledge and it is User Friendly,Easy to Learn and it is Learned By Doing..... [More](#)

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**Virtual Tour**



All what Faculty of Economics and Political Science's Student want from services, you can find it here in this Link.

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  - Very Good
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# FACULTY OF ECONOMICS & POLITICAL SCIENCE

Cairo University

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Publications & Papers
Prospective Students
Current Students
Partnerships
Contacts

Home» About FEPS» Dean's welcome

- ▣ [Dean's Welcome](#)
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- ▣ [FEPS Board](#)
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- ▣ [FEPS In The News](#)

## Welcome from Dean

It gives me great pleasure to welcome you to the official website of Faculty of Economics and Political Science, that faculty which was established in 1960 to offer a bachelor's degree in economics, statistics and political science. Since its establishment, FEPS seeks to graduate high-level specialists in its fields of study; they have the ability to compete, nationally, regionally and globally to promote the development process of their communities.



Prof. Hala El Said  
Dean

Our faculty has a very clear vision towards achieving development and excellence and thus giving an actual realization to its slogan "Commitment.. Excellence..Distinction". FEPS was and still keen to developing its study programs for the undergraduate level and the graduate level to maintain its excellence and its graduates' excellence and to increase its competitive position.

Feps stresses on the importance of scientific research giving both decision makers and students the guide lines which they follow in taking decisions; and this is done through its research centers and programs. An actual example is seen in observing community problems, analyzing and explaining it and predicting its future to find realistic solutions.

We give great importance to students' extracurricular activities which aim to develop an integrated personality of students and to provide them with the required skills for competing in the job market.

We are so proud of our graduates, although their numbers are small if compared to the numbers of graduates from other faculties, but their qualitative effectiveness is so clear. Most of them work in leadership positions at many local, regional and global institutions.

We have also distinguished elite from faculty members in disciplines of economics, statistics, political science, public administration and social-science computing, who have a high level of efficiency and experience regionally and globally.

We have successfully achieved a great step in being an international entity by earning Accreditation Certificate from **National Authority for Quality Assurance and Accreditation of Education**. FEPS became the first faculty earning this certificate in social science field and the second faculty at Cairo University. This shows that our faculty has the institutional capacity, for achieving educational efficiency according to quality standards of international academic institutions, and has developed systems that ensure continuous and sustainable quality improvement.

We look forward to the future with its challenges and difficulties; we hope to put FEPS on the global academic map to join the ranks of notable international academic institutions.

**Prof . Hala Helmy El Said**  
Faculty Dean

**Appendix D: FEPS Website Press Release on Closing Conference**



# FACULTY OF ECONOMICS & POLITICAL SCIENCE

Cairo University

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FEPS Units
Publications & Papers
Prospective Students
Current Students
Partnerships
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Home» IRO» International Relations Office

## International Relations Office

- International Relations Office
- Home
- External Communications
- Student Services
- Academic Staff Services
- Foreigners` researchers services
- Requirements & Instructions
- International Activities
- Announcements & Scholarships
- Current Staff
- Contacts



### GSU ( AYSPS ) & FEPS Partnership Concluding Conference

#### OPENING SPEECH

**Prof. Hala El Said**

Dean of the Faculty of Economics and Political Science- Cairo University

Partnership Concluding Conference: "Enhancing Capacity for Research in Economics"

Tuesday, 25 June 2013

Dear Colleagues, Ladies and gentlemen:

This conference comes to conclude a fruitful partnership that went beyond the traditional approaches of academic cooperation. This partnership aimed to contribute to economics development in Egypt and in the region by achieving more informed policy making by building human capacity in academia, governments and civil society through education and training.

strengthening sustainable outreach capacity in order to serve as a regional hub for teaching, research, and a provider of technical assistance and service in economics in Egypt . Additionally this partnership envisioned a strong research development component that enabled a number of research joint activities between Georgia state university and FEPS faculty.

The expected benefits from this partnership is enhanced by the strength of the two institutions, the Department of Economics-FEPS at Cairo University, which is a prestigious institution recognized for the success of its graduates and for its research productivity. Recognizing the importance of economics education and research, the department's leadership is seeking to strengthen its national and international reputation in economics education and research. Although FEPS offers economic degrees at the graduate level , there is need to strength the graduate courses with multidisciplinary courses, research work and policy analysis that is well needed in Egypt.

I would like to note that FEPS has been the first school in social of social science to be accredited by the national authority for Quality Assurance and Accreditation.

The Andrew Young School of Policy Studies established at Georgia State University (GSU) with the objective of promoting excellence in the design, implementation and evaluation of public policy. AYSPS is establishing a global network of international academic partners and has established itself as a leading institution in the provision of technical assistance and training on public policy issues in developing and transitional countries. The School's faculty has experience technical assistance and training projects in over 60 countries, including Egypt, Russia, Kazakhstan, Palestine, Uganda, South Africa, China, and Indonesia.

In recent years, FEPS Cairo University has incorporated international relations and international cooperation over as an integral part of our missions and is considered an important aspect of the process of education and research.

We are aiming for a strategy that sets out to strengthen the internationalization of our education system. It is my and my colleagues' ambition that we create best possible framework to enable our students and academic staff to navigate an increasing globalized world through joint certification programs, post doc programs, structured visiting professors programs, joint research work and joint conferences and seminars.

INVITATION

Cairo University

Faculty of Economics and Political Science (FEPS)

&

Georgia State University

Andrew Young School of Policy Studies (AYSPS)

International Center for Public Policy

“Partnership Concluding Conference”

**"Enhancing Capacity for Research in Economics"**

Date: Tuesday, June 25, 2013

Location: FEPS

Cairo university, Egypt

For registration or more information

Please contact International Relations Office at FEPS

IB@feps.edu.eg

or

marian3adel@gmail.com







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