

ADVANCED POLICY ANALYSIS

Investment in Youth Reduces Poverty: Evaluation of Job Training Program in Andhra Pradesh, India

**A Study Conducted for the South Asia Rural Development Sector of
the World Bank and Employment Generation and Marketing Mission
of the State Government of Andhra Pradesh**

by

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The author conducted this study as part of the program of professional education at the Goldman School of Public Policy, University of California at Berkeley. This paper is submitted in partial fulfillment of the course requirements for the Master of Public Policy degree. The judgements and conclusions are solely those of the author, and are not necessarily endorsed by the Goldman School of Public Policy, by the University of California or by any other agency.

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Abbreviations and Acronyms

AP	Andhra Pradesh
APDPIP	Andhra Pradesh District Poverty Initiative Project
APL	Above Poverty Line
APRPRP	Andhra Pradesh Rural Poverty Reduction Project
BC	Backward Caste
BPL	Below Poverty Line
BPO	Business-Process Outsourcing
CIDC	Construction Industry Development Council
CVD	Counter-Veiling Duty
DRDA	District Rural Development Agency
EGMM	Employment Generation and Marketing Mission
EWR	English and Work Readiness Job Training Program
FC	Forward Caste
FDA	U.S. Food and Drug Administration
GDP	Gross Domestic Product
GOAP	Government of Andhra Pradesh
GOI	Government of India
GSDP	Gross State Domestic Product
ICT	Information, Communication and Technology
IF & FS	Infrastructure Financing and Financial Services
IKP-LABS	Indira Kranthi Pathakam Livelihood Advanced Business School
ILO	The International Labor Organization
IMF	International Monetary Fund
ITDA	Integrated Tribal Development Agency
JICA	Japan International Cooperation Agency
JNNURM	Jawaharlal Nehru National Urban Renewal Mission
JRP	Job Resource Person
MMS	Mandal Federation
NAC	National Academy of Construction
OCFIT	Orient Craft Fashion Institute of Technology
ODA	Official Development Aid
POP	Poorest of the Poor
R	Indian Currency, Rupee

(Exchange rate as of May 6, 2009, \$1 = R49.59)

RIAD Fund	Remote and Interior Areas Development Fund
ROI	Return on Investment
SC	Schedule Caste
SGSY Fund	Swarnajayanthi Gram Swarozgar Yojana Fund
SHGs	Self-Help Groups
ST	Schedule Tribe
TMT	Theremo Mechanically Treated (Steel)
TRIPS	Trade-Related Aspects of Intellectual Property Rights
VO	Village Organization
WHO	World Health Organization
ZMS	District Federation

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Executive Summary

The state government of Andhra Pradesh established the Employment Generation and Marketing Mission (EGMM) as a mean to reduce poverty. The EGMM Job Training Program was launched in 2005. Since then, 170,415 youths have gained access to jobs and worked in the organized job sector, receiving regular and punctual payments. This job training program was designed for youths living below the poverty line, spanning participants who are illiterate to those with 12th-grade education equivalency. The whole program and employment process is run by a public-private partnership in collaboration with rural villages, comprising a novel approach to the worldwide field of vocational training.

This study was undertaken to analyze changes due to income level of youths and their families who have taken courageous steps to be employed in the organized sector. This research focuses all data from 2008 only.

Main Highlights of the Study

- 68.36% of trained youths were employed in the organized sector.
- At least 67.73% of employed youths increased their income, earning more than Rs. 3,000¹ per month.
- Return on Investment to the government was high, standing at 302.84%.
- 86.36% of trained youths either sent remittances to their families and/or deposited their incomes in savings accounts. Average monthly remittance was Rs. 3,000. Average monthly household income was Rs. 1,500, which means that majority of the people below the poverty line could have already stepped out of poverty.
- Purpose of saving was for education, such as acquiring higher-education.
- Attrition rate was low, from 3% to 4%, while the average rate ranged from 17% to 50% in India.

Main Policy Recommendations

The EGMM job training model linking poor rural youth to the job sectors will become a dynamic employment model in India which is said to have the youngest population in the world by 2020 and whose 75% of workforce is constituted by rural youths. It will be an important investment for multilateral donor agencies to ensure the EGMM model to be adapted to other states with some tailor-made customization. In order to implement the EGMM model effectively to other states, its lessons and key processes need to be

¹Exchange rate as of May 6, 2009, \$1 = R49.59

disseminated widely to related governmental bodies of state governments and the central government of India, such as Ministries of Youth Affairs and Sports, Human Resource Development, Rural Development, and Labor and Employment.

In AP, based on the empirical findings above, more funding and investment are needed to expand employment opportunities for the vulnerable poor, especially for youths who have the potential ability to reduce poverty.

With increased funding, EGMM needs to work on the following issues:

- ✓ Investment in English and Work Readiness Job Training Program and Construction Job Training Program, including having more qualified trainers, better training for trainers, and a language laboratory
- ✓ Counseling/mentoring services for youth, especially for those who migrate from villages to more developed cities
- ✓ Tracking system of alumni to determine long-term impact of the job training program on their incomes
- ✓ Expansion of the EGMM private sector team, which would enable the team to work more on market analysis and program innovations.
- ✓ Investment in new sectors, such as the pharmaceutical industry, that have higher market potential
- ✓ Rigorous impact evaluation with randomization to measure accurate impact level

Chapter 1. Introduction

The International Labor Organization (ILO) estimated that more than one billion youth will enter the global labor market over the next decade.² However, it is predicted that there will be only about 300 million new jobs created during the same period due to current worldwide financial crises. Of the world's youth, 89% were living in developing economies in 2005.³ This gap between labor supply and demand will create serious social and economic problems in developing countries.

Vocational training, or job training, is a key contributor of economic recovery and development, both for the nation and the individual. Job training is as essential as primary-school education, especially for the poor. Such training provides flexible education and is designed to meet the demands of youth and the market. Not only does job training lead to youth employment, but it also holistically develops labor forces and gives hiring sectors a chance to grow. Most importantly, job training is a tool to empower people by nurturing self-confidence while making achievements in industry and the economy as well as ensuring social development.

The Andhra Pradesh District Poverty Initiative Project (2000-2006) and the Andhra Pradesh Rural Poverty Reduction Project (2003-2008) have initiated a rural poverty reduction program by establishing training institutions for youth, with collaboration from the government of India, the state government of Andhra Pradesh, and the World Bank. In addition, EGMM within the AP's Department of Rural Development focuses on providing employment for underprivileged youth. Since 2005, EGMM has trained 225,332 rural youth, of which 75.63% percent have been successfully employed.⁴ The programs successfully link the private

²ILO (2006).

³Idem.

⁴The EGMM Data Bank (2008).

sector and the poor in local communities, with the aim of building win-win models in various industry sectors.

This paper focuses on job training programs provided through a public-private and rural community partnerships in Andhra Pradesh (AP). The paper analyzes the impact of vocational training on poverty reduction, and specifically, on variables such as household income, remittances, and household changes in expenditure and investment. The analysis will contribute to the improvement of job training, and, if necessary, provide a window of opportunity for youth to achieve better futures by removing the stigma of poverty. Toward this end, this research paper focuses on the evaluation of job training programs in AP, a market analysis, and a proposal for future impact evaluation.

Section 1. Policy Context

The literacy rate of AP improved to 60.47% in 2001, from 44.1% in 1991. The unemployment rate of AP was 6.67%, slightly higher than the average rate of 6.03% for India. The unemployment rate among the educated was 7.3%, which was higher than the overall AP unemployment rate of 6.67%. Of the 3.1 million job seekers registered in employment exchanges, 57% were unskilled. With all these numbers presented in census and government databases, it was expected that the unemployment rate would be higher in rural areas, as many of the rural people were employed in an unorganized sector,⁵ which is often not visible in the census.

AP has been beset with an increase in youth population, illiteracy, an unskilled labor force, unemployment, and vulnerability in rural households, while the economy and way of living have been impacted by overwhelming globalization.

The public-private partnership structured by EGMM allows us to shed light on the role of public-private partnerships in order to create effective job opportunities for poor youth.

⁵A job which does not pay salary regularly, an unstable seasonal job, or/and a job which exploits a laborer.

The EGMM's structure has become increasingly popular in India, in achieving poverty reduction; thus, many states are trying to apply EGMM's structure and methods.

(1) Rural Communities and Households of the Poor

Job opportunities and employment have positive effects on individuals and entire households, especially in poor areas. People will have self-confidence and be self-empowered through job training, as they will gain a sense of negotiation power to manage their economic situations and concomitant challenges (Oxenham et al., 2000). Job training also constitutes an important first step in building their professional lives, which can lead to greater accomplishments in later years. Moreover, the nonagricultural labor sector gives a household stability in the form of a fixed income, which is much different from the seasonality and unreliability of agriculture employment. In microfinance, it has been shown that women tend to save money for the next generation by investing money in their children's education (Cheston & Kuhn, N.D.). This generates more income and confidence for the whole household in the long term. Therefore, job training that leads to job opportunity is a powerful tool to remove the stigma of poverty from a poor household.

India has the youngest population in the world: the population in India of people between the ages of 15 and 24 increases by 5.4 million each year.⁶ The median age in India will be 29 years by 2020, in comparison to 37 years in China and the United States, 45 years in Western Europe, and 48 years in Japan.⁷ This demographic dividend is recognized as an opportunity by EGMM, which aims to channel the energy of the growing youth population into market-linked trainings and employment, with the rural community as stakeholders.

(2) The Central and Local Government Levels

Job access through job training is likely to have a large-scale positive impact. Job creation is the fastest way to reduce poverty in rural populations (Ahmed, 2007). Also, job

⁶Census Data of Registrar General of India.

⁷C.P. Chandrasekhar Jayati Ghosh (2006).

training has a sustainability aspect, similar to the large and sustained returns from providing primary education to children. Although job training is a longer process, the job training will ultimately generate an active labor market if more people have access to better jobs.

Investment in a positive labor market eventually provides strong returns to the country.

Furthermore, to have a good nation with decent work for every citizen is important, as it reflects the country's policies and governance capability. In democratic nations, it is necessary for governments to provide their people with opportunities for deriving satisfaction out of life. Having certain levels of satisfaction would certainly generate more incentives for the younger generation. Youth will aspire to accomplish higher goals than their parents did.

In addition, running job training programs and establishing a link to the private sector is easily measured with various timelines. The benefits of job training can be monetized by considering the number of employees who have received training and their salaries. Finally, as a political tool, it is necessary that the state government of AP have convincing statistical data to attract more private companies as partners and to increase participation among local community members.

(3) The Private Sector

According to EGMM's experiences, salary levels and expectations of urban youth have risen with more urban opportunities, such as business-process outsourcings.⁸ Therefore, it is becoming more challenging to employ large numbers of workers from the conventional urban labor pool. In contrast, rural youth are motivated to work and become loyal employees. These characteristics of rural youth help companies fulfill their mandate of providing training to facilitate the entry of rural workers into the workplace (Shenoy, 2008). Trained rural youth are important information resources, as they know both rural-market needs and labor-market information best.

⁸Business-process outsourcing (BPO): a form of outsourcing which involves the contracting of the operations and responsibilities of a specific business function to a third-party service provider in the aim to reduce cost and increase efficiency.

From these dimensions, job creation would have a certain or even greater impact on poverty alleviation, not only in AP but also in India as a nation and even in the rest of the developing countries in South Asia, where there is a common social background. Linking government, rural communities, and the private sector generates greater aspiration for the labor market, which contributes to the poverty alleviation.

Based on the research conducted by the author in February, 2009, EGMM has successfully implemented various types of job training tailored to skills required by each private job sector. Not only are such attempts unique in the globe, but they have also resulted in creating long-term effects, with returns on the investment of governments being high, standing at 302.84% (for more information on this finding, see Chapter 4).

Section 2. Employment Generation and Marketing Mission Program

In October 2005, EGMM came into existence as an autonomous body under the Rural Development Department of the state government of Andhra Pradesh, in Hyderabad. Since then, EGMM has mobilized 170,415 socially and economically underprivileged youths to various job sectors. As EGMM is under the supervision of the Rural Development Department, it only targets people in rural areas. EGMM today is one of the largest employment-generation systems for the poor in the world. (See Appendix B for the brief history of EGMM and its structure system.)

Section 3. Eligibility and the Job Training Programs

There are three main stakeholders in achieving EGMM's goals and objectives (See Appendix B for more information about EGMM's structure):

- (1) The government, or EGMM, spearheaded the program through funding from the central and the state governments and the World-Bank-funded IKP.
- (2) Private companies were involved in program development and recruitment.

(3) The rural community identified unemployed youth and counseled them on enrolling in the training program.

In order to be eligible for such programs, the following criteria had to be met:

- (1) Age: between 18 and 27, except for the construction sector, which accepted people up to the age of 35.
- (2) Economic status: below the poverty line (BPL).⁹
- (3) Education status: illiterate to 12th grade for Construction and Textile Programs; 11th-grade minimum for programs such as English and Work Readiness and Skylark Programs which requires English and computer skills.

Youths were placed into one of the training programs based on their education background, skills, age, and individual preference. The training was provided for 3 months, except for the Security Guard Job Training Program which took 2 to 3 weeks. Some youths were exempted from a 3-month training if they already had a sufficient level of skill. If needed, EGMM provided a bus pass to each trainee, food, and accommodation. However, stipends were not paid during the training program. EGMM provided one-time stipends of Rs. 1,500 for trained youth only for the first month of employment. The stipend was usually consumed on their new accommodations.

The training programs were provided by the government in conjunction with the private sector. Following is a list of the training programs:

- CMC Computer: This set of job training programs was provided by CMC Limited, a division of Tata Enterprises. It included training programs in telecommunications sales, data entry, computer maintenance, and photo development. Trainees also learned computer skills.

⁹In general, AP set the poverty line at the annual income of Rs. 18,000. The poorest of the poor (POP) were landless, houseless, or in special conditions in which the youths' parents or breadwinners had difficulties earning income. However, the district office collaborated with each village to decide who was BPL and POP. This is because the poverty line and the definition of POP vary across villages.

- Computer Graphics: Trainees were taught computer and graphic design skills. Skylark, a private company, was the training provider.
- Construction: Restricted to men. The program was divided into (a) painting and decoration, (b) electrics, (c) plumbing and sanitation, (d) masonry, and (e) bar bending. Trainees learned theory in the morning and were given practical application exercises using real materials in the afternoon. Illiterate youth could enroll, except in the electrics training course, which required trainees to have completed the 12th grade by the time they joined the job training program. This course also required mathematical skills. The training providers were EGMM, the National Academy of Construction (NAC), and the Construction Industry Development Council (CIDC).
- District Model: This program was similar to the English and Work Readiness Job Training Program. For example, the Nellore District provided a job training program for the development of service and administrative skills, together with English and computer skills. For the purpose of simplicity in this research, the numbers reported for the District Model included trainings provided by Ants and Partners and the Nobel Educational Empowerment Society.
- English and Work Readiness: This program was designed to meet the general needs of the private sector. It trained youths in English communication and computer skills. Service, sales, retail, back-office processing, the manufacturing sector, hospitals, and colleges were the major recruiters. The main provider of this course was EGMM.
- Gems and Jewelry: This was provided only in Hyderabad and was designed to train youth to work in the jewelry industry. It was provided by Hyderabad Gems SEZ Limited.
- Hotel Service and Management: This training program was provided mainly by the International Institute of Hotel Management and Global Hotel Management.

- IKP-LABS: This multidisciplinary program provided training for youths to work in the hospitality industry, the service sector (such as patient assistant, customer relations, and sales), and other fields, including data entry/data processing works and electrical repair.
- Security Guard: Trainees learned how to salute, greet, and register visitors, and evacuate people in case of emergency. They also learned basic English communication skills. Securipro Protection Guards Private Limited provided the training.
- Textiles: This program was opened for women only. They were trained to sew whole parts of a shirt. Illiterate youth could enroll. The training providers were EGMM, the Orient Craft Fashion Institute of Technology (OCFIT) and Infrastructure Financing & Financial Services (IF & FS).

Chapter 2. Objective and Methodology of Project Assessment

Section 1. Objective and Methodology

This paper aims to assess the ongoing EGMM Job Training Programs through two approaches:

(1) Quantitative approach: This involves describing the economic effects of the program on participating rural youth by comparing their situation before and after being employed as a result of participating in the program. All of the 2008 data from 22 districts was retrieved for the analysis. This included 170,589 youths.¹⁰

(2) Qualitative approach: This involves assessing changes in the lives of youths living in rural poverty in more depth, through case studies based on interview surveys conducted Feb. 8–22, 2009 in Nellore District and Hyderabad.¹¹

¹⁰The data was retrieved in January and April 2009 from EGMM data bank.

¹¹See Appendix A for geographical location of Nellore District and Hyderabad.

Table 1

Methodology of the Study

Target	Method	Sample
Youth	Data analysis using data bank	170,589 youths
	Survey interview (see Appendix C)	51 trained youths 27 youths participating in the training 19 untrained youths
Hiring company	Survey interview (See Appendix D)	15 managers from various job sectors (commercial banking, textile, construction, retail, and service)
Training center	Interview	11 trainers
EGMM and state government	Survey interview (See Appendix E)	6 government officials from EGMM and 2 job resource persons

Section 2. Limitations of the Study

The population samples and data did not perfectly represent the whole population of youth in AP, due to lack of randomization in the selection process. Most importantly, the enrollment process was self-selected. All samples of youth and study districts for survey interviews were selected by EGMM. In addition, collecting data on income level for pretests was challenging, as rural poor households are dependent on seasonal and unstable income.¹² Most importantly, income level was not comparable between the pretest and the posttest. For the pretest, samples were classified into three income categories — APL, BPL and POP — while the actual amount of salary data was collected for the posttest. As there was no secondary data available to make it possible to infer the distribution of pretest income levels, it was not possible to conduct a precise impact evaluation. Chapter 7 introduces a suggested methodology for thorough impact evaluation that would have fewer limitations than this study has.

¹²Pretest: Data collection from participants prior to their participation in the program.

Chapter 3. Data Analysis and Case Studies

Section 1. General Data Profile

Number of Youths Trained and Employed: In the fiscal year of 2008, 170,589 youths were registered in the EGMM data bank; 9,205 were undertrained; 100,332 youths completed training; and 68,588 youths were placed in employment. The financial crises began in the United States in September 2008 and impacted the employment rate in Andhra Pradesh. The year 2008 marked the lowest employment rate of 68.36%. Of placed youths, 58.12% were males and 41.88% were females.

Table 2

Number of Youths Trained and Employed (2005-2008)

Fiscal year	Trained	Employed	Employment rate
2005	11,200	8,960	80.00%
2006	33,800	27,040	80.00%
2007	80,000	65,827	82.28%
2008	100,332	68,588	68.36%
Total	225,332	170,415	75.63%

Note. Employment is calculated by dividing the number of employed youth by the number of trained youth.

Source: Employment Generation and Marketing Mission Data Bank (2008).

Gender Distribution: There were 170,589 youths collected from EGMM's data bank. Out of 170,589 youths, 63.93% were male and 36.07% were female. The overall gender distribution of AP was 50.55% males and 49.45% females.¹³ There was a significant statistical difference between males and females in the registration for the job training programs and employment. (The T-value of the registration was 29.17, and the t-value of for the employment was 41.24.)

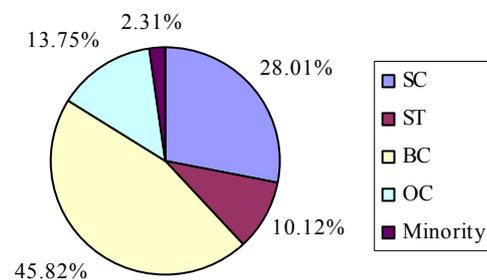
¹³Aponline.com accessed May 1, 2009.

The main reason the gender distribution of the youth registered in the EGMM data bank did not match with the overall gender distribution is that the sample population was not randomized to enroll in the job training program. Participants were either self-selected or chosen by a member of SHG. Relative to men, women in the Schedule Caste (SC) and the Schedule Tribe (ST) have far more limited access to employment resources (Dunn, 1993)

Caste Distribution: The EGMM Job Training Programs focus on impoverished rural youth whose annual household income level was below Rs. 18,000, and the programs were not intended to target a specific caste. The SC, the ST, and the Backward Caste (BC) comprised 83.95% of total placed youth. Other Caste (OC) included the Forward Caste (FC).

Figure 1. Breakdown of Social Status of Employed Youth (2008)

(Total number of employed youth is 68,588.)



Note. SC (Schedule Caste); ST (Schedule Tribe); BC (Backward Caste); OC (Other Caste).

Source: Employment Generation and Marketing Mission Data Bank (2008).

Section 2. Assessment of the Quality of Selection Process

Despite the criteria for age, economic status, and educational status, noneligible youths were signed up for the Job Training Programs.

Age: Youths who were between 18 and 27 were eligible for the program, except for the Construction Training Program, which accepted people up to 35 years old. However, youth aged under 18 were 1.95% of the registered youth; youths aged over 35 were 0.82%. Noneligible people were also employed.

Table 3

Age Profile (2008)

Age	Registered	Training completed	In training	Training dropped	Employed
-17	1.95%	1.50%	1.00%	2.22%	1.58%
18 – 27	88.65%	90.83%	88.70%	90.86%	90.98%
28 – 35	8.59%	7.06%	9.54%	6.37%	6.82%
36-	0.81%	0.62%	0.76%	0.54%	0.62%
Total population	170,589	100,320	9,205	1,663	68,588
Mean	21.58	21.32	21.90	20.95	21.22
Median	20	20	21	20	20

Source: Employment Generation and Marketing Mission Data Bank (2008).

Economic status: Out of 170, 589 youths, 12.33% were classified as the poorest of the poor (POP), and 87.05% of the youth lived below poverty line (BPL). EGMM provided the job training programs only for those living under BPL and POP. However, 0.62% of registered youth were living at APL. The state government of AP defines the poverty line as annual income level of Rs. 18,000. However, each village has a right to claim their poverty line and who should be registered as POP and BPL, as economic status and living condition vary across villages. POP includes single women or widows, the landless, the homeless, and the physically handicapped, as well as those who have any obstacles in economic activities.

Educational status: As one criterion for enrollment was to have at least 10th grade completed, except for the Construction and Textile Job Training Programs, 64.17% of the youth completed 10th grade or in/completed the secondary education. Youths who completed 10th

grade were marked the highest, as the Construction Job Training Program, which does not require to complete 12th grade, shared more than one third of the enrolled youth (see Table 7). As regulated by the state, education¹⁴ is free of cost for the SC and the ST. There were 11.77% of youth who were registered as having an educational level of below 10th grade. Also, approximately 12.68% of youth were either in college or in graduate school (also known as “postgraduate school” in some countries including India) and were considered to be capable of finding a job by themselves.

Table 4

Educational Status (2008)

Grade	Frequency	%
Below 10 th	20,038	11.77%
10th failed	19,385	11.38%
10th passed	66,566	39.09%
12th failed	15,810	9.28%
12th passed	26,902	15.80%
College failed	3,544	2.08%
College passed	17,047	10.01%
Graduate failed	208	0.12%
Graduate passed	805	0.47%
Total	170,305	100%

Source: Employment Generation and Marketing Mission Data Bank (2008).

Section 3. Salary and Remittances

The following economic and gender profiles show that the program successfully benefited the rural youth, including females and those with low economic backgrounds.

Starting monthly salaries after the placement are shown in Figure 3. Obviously, a salary level

¹⁴The educational system in India is as follows: Elementary School - 1st~5th grade; Secondary School - 5th~10th grade; Higher Secondary School - 11th~12th grade; College: Professional - 4 years, Medical school - 5 years, or Arts/Commerce - 3 years; Graduate School - 1.5 to 3 years.

was largely dependent on the hiring company and the job sector. Some job sectors, such as construction and textile sectors, provided food and accommodation for their employees. However, some people had to spend, on average, Rs. 2,500 for their living expenses. Nevertheless, 67.73% of employed youth earned monthly salaries of more than Rs. 3,000, which reveals that more than two thirds of the employed youth earned some extra money for their own saving or remittances. Mean difference in salary between BPL and POP was statistically significant. (See Table 5.)

Table 5

Mean Difference in Salary Between Gender and Economic Status

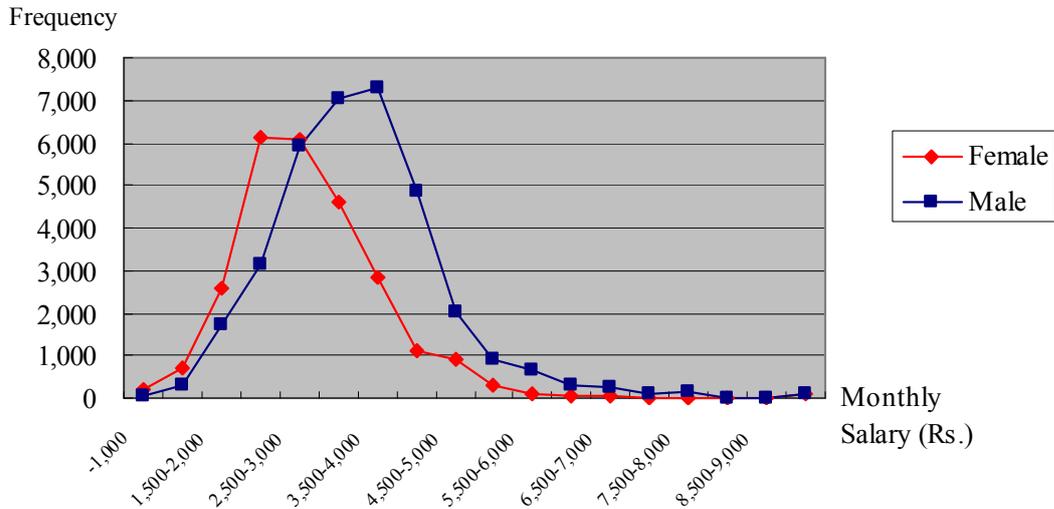
	Sample size	Mean in Rupees	Standard deviation	Median in Rupees	p-value	Significance
Male	38,860	3,668.19	1,139.84	3,500	0.0001	***
Female	28,728	3,074.23	1,769.49	3,000		
BPL	57,687	3,434.58	1,535.98	3,300	0.002	***
POP	10,463	3,347.14	1,021.42	3,500		

Note. *** Statistically significant at confidence level of 99%.

Source: Employment Generation and Marketing Mission Data Bank (2008).

The job training programs benefited both rural males and females. However, as per Figure 2, females were employed with lower salaries compared to males. The mean difference of salaries between males and females was statistically significant. (See Table 5.)

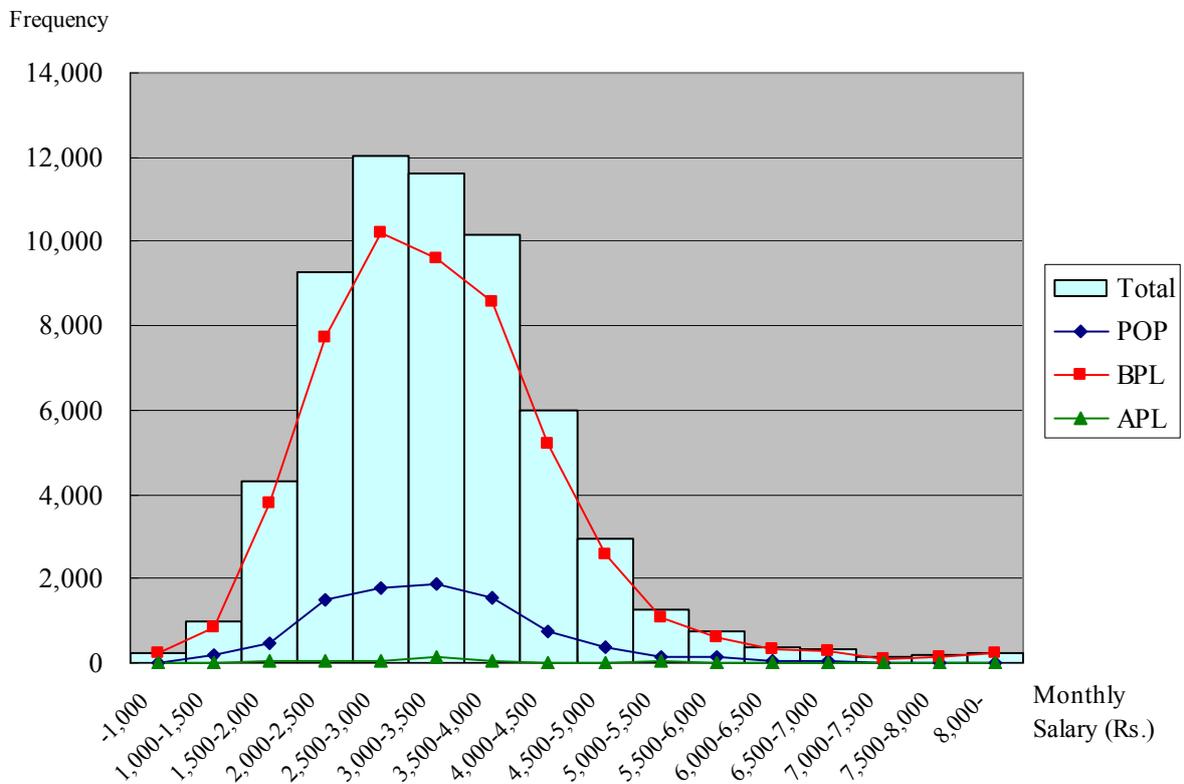
Figure 2. Salary Distribution by Gender



Note. See Table 5 for sample size, mean, and median.

Source: Employment Generation and Marketing Mission Data Bank (2008).

Figure 3. Starting Salary Range of Youth Placed (2008)



Note 1. Total number: 68,584, mean-Rs. 3,402.69, and median-Rs.3,300.

Note 2. POP: total number 10,463, mean-Rs. 3,347.14, and median-Rs. 3,530.

Note 3. BPL: total number 57,687, mean-Rs. 3,411.27, and median-Rs. 3,300.

Note 4. APL: total number 438, mean-Rs. 3,599.30, and median-Rs. 3,500.

Source: Employment Generation and Marketing Mission Data Bank (2008).

Remittance: According to case interviews with employed youth,¹⁵ of 51 respondents, 86.36% of trained youths either sent remittances to their families and/or deposited their incomes in savings accounts. The purpose of saving was for education, such as acquiring higher-education and MBA degrees.

In general, it cost around Rs. 1,000 per month for food per 4 to 5 family members in the Nellore District, which constituted approximately 67% of the monthly household income of BPL.¹⁶ Among the youth who sent remittances, the average monthly remittance amount was Rs. 2,175.68. (See Table 6.) Youth enabled themselves to send remittances usually after 3 months of employment, as setup costs were high in the beginning, especially in cities. Female respondents working in retail and textile companies marked the lower part of remittance amounts, whereas male respondents working as door-to-door salespersons and security guards sent remittances more than Rs. 3,500 per month from their overtime salaries and incentives from sales. Obviously, the amount of remittances depended on occupation and salary, as well as whether food and accommodation were provided.

Table 6

Remittances

Amount (Rs.)	0	1,000-2,000	2,000-3,000	3,000-4,000	5,000	6,000	N/A	Total
Frequency	8	14	7	3	3	2	9	46
%	17.39%	30.43%	30.43%	30.43%	30.43%	30.43%	30.43%	100%
Mean (Rs.)	2,175.68							
Median (Rs.)	2,000							

¹⁵Survey interviews were conducted in February 2009 in Hyderabad and Nellore by the author.

¹⁶Date from survey interviews conducted in February 2009 in Hyderabad and Nellore by the author.

Source: Data from survey interviews conducted in February 2009 in Hyderabad and Nellore by the author.

Section 4. Dropout and Attrition Rates

Dropout Rate: Males had higher dropouts and nonenrollment rates compared to females. (See Table 7.) The reason for the higher dropout rates is that 54.03% of dropouts were from the Construction Job Training Program, which provided trainings only for males. Of the 23,815 total youths enrolled, 3.94% dropped out. This program had difficulty keeping students in training centers. According to construction trainers and EGMM staff members,¹⁷ youth left the Construction Job Training Program because they had lower education levels than did those in other job training programs and because they were more likely to be engaged as daily laborers. They found being a daily laborer more attractive, as the wage payment is daily. In addition, parents pulled out their youth to help them during harvest season. Also, some youth felt that they had learned enough from participating in the training center for a few days and were not aware of the value of completing the program. (See Table 8 for the dropout rates for other job training programs.) Overall, the dropout rate was 1.56%.

Table 7

Training Status by Gender (2008)

Gender	Not enrolled	Enrolled			Total	Total number
		Completed	Dropped	In training		
Male	37.59%	55.60%	1.30%	5.51%	100%	110,078
Female	30.50%	63.79%	0.50%	5.21%	100%	61,716

Source: Employment Generation and Marketing Mission Data Bank (2008).

Distribution of Employment: Because each EGMM district office identified the needs of the local market in collaboration with the private sector and established training centers

¹⁷Interviews of trainers and EGMM staff members were conducted in February 2009 as a part of this research.

accordingly, distribution of youth in each training program varied over districts. Overall, the enrollment distribution rate in Table 8 shows that the District Model, Construction, IKP-LABS, and Textile Job Training Programs were the major options for youth.

Table 8

Dropout, Employment, and Enrollment Distribution Rates (2008)

Course	Dropout rate	Employment rate	Enrollment distribution rate
Accounting Software	0.77%	43.69%	1.85%
CMC Computer	1.23%	69.73%	5.29%
Construction	3.94%	59.83%	21.34%
District Model	0.28%	65.46%	23.62%
English and Work Readiness	1.17%	79.44%	9.73%
Gems and Jewelry	10.07%	12.96%	0.88%
Hotel Service and Management	0.32%	66.03%	1.70%
IKP-LABS	2.08%	67.56%	14.74%
Security Guard	0.71%	75.31%	2.01%
Skylark	0.00%	75.31%	3.85%
Textile	2.63%	83.34%	14.99%
Average	1.56%	66.19%	

Note. The dropout rate was calculated by dividing the number of dropouts by the total number of enrolled youths. The employment distribution rate was calculated by dividing the number of youth enrolled in a certain job training program by the total number of employed youth. The total number of dropouts was 1,736; the total number of employed youths was 66,570.

Source: Employment Generation and Marketing Mission Data Bank (2008).

Attrition Rate: Although salary incrementation was relatively lower in the retail and textile sectors,¹⁸ female workers stayed in those jobs, as they felt safe in their workplace. For example, at MORE, a convenience store facing a main street and having air conditioning,

¹⁸Data collected from case interviews which were conducted in Hyderabad and Nellore in February 2009 by the author of this paper.

women mentioned that they felt secure.¹⁹ Women working at Intimate Fashion, a textile factory in Chennai, responded that they would stay at Intimate Fashion as long as they could for security and work-environment reasons, although there is another company with higher salary and better opportunities.²⁰ Intimate Fashion provides food, clean accommodation, and some entertainment during employees' off-duty time. The companies interviewed²¹ did not have the exact figures for attrition rates. However, the monthly attrition rate was 3% to 4% for youth hired through the EGMM Job Training Programs, whereas the attrition rate of each job sector ranged from 17% to 50% in India.²² Attrition rates for females were lower than those for males. The reason for leaving the company was to work for another company with a higher salary and position for the males, and for the females, the reason for leaving the company was marriage. The common reasons of attrition were homesickness and festivals in village. For example, rural youth respect annual festivals in their villages and therefore request permission for annual leaves; however, their managers hardly allow them to take more than three days at one time. Therefore, they simply quit the job, as it takes at least five days to attend a festival.

Source of Information: EGMM utilizes two formal channels to induce youth to enroll in the job training programs: job resource persons (JRPs) and self-help group (SHG) members. JRPs distribute a handy one-page advertisement flier in villages. In addition, an informal source, such as “word of mouth” of friends and family, seems to be the most effective and strategic way to mobilize youth. Because trainers of the program have a connection to villages, they sometimes visit villages to disseminate information about the job training program. Other sources of information include advertisements in newspapers, television, and radio.

¹⁹Data collected from case interviews which were conducted in Hyderabad and Nellore in February 2009 by the author of this paper.

²⁰Idem.

²¹More (retail), Intimate Fashion (textile), Hindustan Unilever (retail and sales), Maytas (construction), Big Bazaar (retail), HDFC Bank (banking), and Café Coffee Day (fast food service).

²²Retention.Narukurihub.com (2007).

Table 9

Sources of Information About the Training Program

Rank	Source of Information	%
1	Friend/Family	25%
2	SHG	18.75%
3	Alumni/Employed youth	12.50%
3	Trainer	12.50%
3	Flier	12.50%
3	JRP	12.50%
7	Newspaper	6.25%
	Total	78 youths

Source: Data from survey interviews conducted in February 2009 in Hyderabad and Nellore by the author.

Table 9 interprets that network within the village and friends, family, and SHG members were the major source of information. It is often the case that rural people are cautious in taking a new step, as they want to avoid decreasing their wages. Losing one source of labor from a household for 3 months adds more uncertainty, as the employment opportunity does not look guaranteed for them, despite JRP's in-depth explanation. In addition, some youth feel hesitation about moving away from the village to work in a city because of differences in culture, lifestyle, and sometimes language. Therefore, actual successful stories of the job training from alumni are compelling and help to convince rural youth to enroll in job training programs.

Chapter 4. Social Return on Investment

The concept of social return on investment (SRI) will be applied in conducting a cost-benefit analysis of the job training program. SRI is useful in evaluating the efficiency of

government investment in the job training programs and in comparing the efficiency of different job training programs.

SRI is calculated by dividing the benefit, or salary earned by employed youth, by the total cost of the investment, or training cost. The result is expressed as a percentage. The cost of the investment is the amount EGMM spent per trainee, and the gain on the investment is considered to be the initial salary of trainees after being placed in jobs. Data on expenditure and cost per trainee were for the fiscal year of 2008.

Net total training cost was Rs. 902,647,968.61 and covered 111,586 participants including 1,736 dropouts.²³ The social benefit of the program is the total annual salary earned by 66,570 employed youths, which was Rs. 227,796,179.²⁴ Thus, SRI of 2008 was 302.84%. In other words, EGMM got a return of approximately 3 times in one year from its one-time investment of Rs. 8,090.49 per person.²⁵

The Security Guard Job Training Program was the most efficient program in terms of SRI. At two to three weeks, it was the shortest of the job training programs, and it did not require extensive investment in equipment. Also, trainers were sent from the Department of Police, so there was no need for in-house trainers. The salary was high, as work shifts were irregular and there was overtime compensation.

The English and Work Readiness Job Training Program had the second highest SRI, despite of relatively high cost of training materials. The training cost varied according to infrastructure, depending upon whether EGMM reused an abandoned government building or had to rent or build new space for classrooms. In either case, the initial investment for each training center was high due to installation of computers, audio equipment for English classes and etc.

²³EGMM Training Cost Data (2008).

²⁴Retrieved from the EGMM data bank.

²⁵In this calculation, salary level was fixed regardless of age and any salary incrementation was disregarded for simplicity.

The least efficient program was Gems and Jewelry Job Training Programs. SRI marked the lowest with 28.5%. It had the highest dropout rate and the lowest employment rate (See Table 10).

Table 10

Net Training Cost per Person and SRI by Job Training Program (unit: Rs.)

Job training program	Training cost per person	Average starting monthly salary	SRI
Accounting Software	10,850.00	3,828.87	172.08%
CMC Computer	10,550.00	4,291.61	304.82%
Computer Graphics	10,525.00	5,076.16	329.89%
Construction	6,178.33	3,538.49	351.29%
District Model	6,650.00	3,302.59	291.84%
English & Work Readiness	9,525.00	3,814.70	358.45%
Gems & Jewelry	11,600.00	3,472.00	28.50%
Hotel Service & Management	8,741.67	3,217.45	257.37%
IKP-LABS	8,450.00	2,997.99	265.66%
Security Guard	4,390.00	3,944.73	806.31%
Textile	10,150	2,926.45	271.51%
Total	8,090.49	3,421.90	302.84%

Note. See page 8-9 for the description of each job training program.

Source: Employment Generation and Marketing Mission (2008)

Quantitative values, such as SRI, which can easily be converted to monetary values, were not only the return to the government. Through increasing the number of youth in the labor force in the organized sector, EGMM also trained private companies to be sensitive to the needs of their employees. This can be expected to produce a positive circulation and working environment in the labor market, and the profit should eventually return to society in the form of positive social growth and improved attitudes towards work. Furthermore, assuming 50% of the youth send their families remittances from their salaries averaging Rs.

3,000 per year, their training will eventually translate into investment in rural villages. Social growth includes increased investment in children's education, women's empowerment, and increased self-esteem of family members in villages where people traditionally are dependent upon a traditional way of life with seasonal vagaries.

Chapter 5. Analysis of Job Market and Business Trends

Section 1. Overview of the Economy of India and AP

India has the world's twelfth largest economy and the third largest in Asia after Japan and China.²⁶ The breakdown of sectors in 2007 was 54.8% for the service sector, 26.3% for the industrial sector, and 18.9% for the agricultural sector. Approximately 60% of the population works in the agricultural sector.²⁷ Despite market liberalization in 1991 and rapid economic growth over the past decade, India ranked 122nd in ease of doing business in 2009.²⁸ Slow procedures, bureaucratic hassles, and corruption add to the difficulties of launching new businesses. However, at the same time, the government promotes investment in telecommunication, insurance, and aviation, and the Indian economy is strong in a number of areas. Software companies have contributed to modernizing the Indian economy by exporting services. Consequently, India provides software workers who have advanced English-speaking skills to the rest of the world. The knowledge-driven information, communication, and technology (ICT) sector contributes 80% of the world's offshore ICT services.²⁹ Approximately 50% of the world's back-office processing is located in India.³⁰ Entertainment, including Bollywood cinema, and pharmaceuticals attract foreign investment as well.

²⁶CIA (2008).

²⁷Idem.

²⁸Doing Business 2009

²⁹Kojima (2006).

³⁰Idem.

Table 11

Breakdown of Gross Domestic Product by Sectors

	State (AP) GDP%	National GDP%
Service	49%	54.80%
Industry	27%	26.30%
Agriculture	24%	18.90%

Sources: *The World Fact Book* (2008) and the Centre for Monitoring the Indian Economy.

AP's economy consists predominantly of services and it accounts for 49% of the gross state domestic product (GSDP) and employs 20% of the workforce.³¹ AP's per capita annual income was about US\$503 in 2003; the national average was US\$511. Annual growth was 5.3% during the first half of the 1990s, accelerating to 6.1% in the second half of the decade. The service and manufacturing sectors marked significant development, and the Information Communication and Technology (ICT) sector has been expanding at an annual rate of 52.3%. This strong performance was largely due to the state's effort in improving the investment climate. AP is one of India's top recipients of foreign direct investment, ranking fourth, and it accounts for approximately 7% of all new investment in India.³² In 2007, AP ranked fourth in India for its ICT exports. Biotechnology is also becoming a focus.

It is still uncertain how the global financial crisis instigated by the U.S. mortgage crisis will affect AP, and consequently, it is not entirely clear on which areas EGMM should be focusing in order to meet market needs at this time. The International Monetary Fund (IMF) predicts that world economic growth will fall to 0.5% in 2009, which would be the lowest rate since World War II. Gross domestic product (GDP) growth in India was 9.3% and 7.3% for 2007 and 2008, respectively. However, the IMF prediction is that India's growth

³¹Kojima (2006).

³²Department of Industries, India.

will be reduced to 5.1% for 2009, with a gradual recovery bringing it to 6.5% in 2010.³³ The World Bank estimates that a 1% decline in the growth rate in a developing country traps an additional 20 million people in poverty.

According to interview research conducted in February 2009 by the author, the retail, manufacturing, and textile sectors were experiencing a reduction in business. For example, Intimate Fashion, a textile company in Chennai, had to extend the date for the opening of its new factory. A Chinese shoe-making factory that contracts with Nike, APACHE Footwear Ltd., ceased recruiting new employees for several months, including youth trained at EGMM training centers. Both companies have in common that their products are exported to foreign countries. Consumer expenditures have been decreasing as a result of a financial crisis at retail shops, such as MORE. On the other hand, some firms, such as HDFC Bank in Hyderabad, have indicated that their business is expanding despite the crisis. Construction and security companies also report that their services are in great demand, especially in urban areas. Indeed, the construction industry in AP is facing a severe shortage of skilled workers.

As Table 11 illustrates, the tertiary sector, services, is ahead of the agriculture and industry sectors. Within the service sector, ICT and ICT-related services, such as BPOs, are industries well known in the world that have been principal attractions of India. In addition, the retail, healthcare, and hospitality (hotels and tourism) industries account for growth in the tertiary sector.

Sections 2, 3, and 4 of this chapter discuss the current situation in, and future prospects of, selected sectors. It is recommended that EGMM refer to these sections in deciding how to invest in its job training programs.

³³International Monetary Fund (2009).

Section 2. Construction Sector

Despite the severe global crisis, the Indian construction industry is promising. This is especially the case with the residential property industry, where property developers have announced price cuts of 15%-25% in the construction of affordable houses for the 350 million middle-class Indians.³⁴ Also, an increase in demand for housing in urban areas has boosted construction. Several government stimulus plans that were implemented before the financial crisis began are supporting the development of the construction sector. In order to maintain India's annual GDP growth above 7% and to provide a stimulus for the generation of employment (the construction sector is the second-largest sector in employment generation), the government of India along with the Reserve Bank of India launched several stimulus plans which have been benefiting the real estate and housing industries and consequently the construction sector as well. The government aims to offset the downturn from the financial crisis with the growth of other sectors. Some predict that the housing industry alone will add 1.5%-2% to India's GDP.³⁵ As part of a stimulus package, the government of India reduced the bank cash reserve ratio, the repossession rate, and the reserve repossession rate, setting up a low-interest rate regime.³⁶ This low-interest policy has had a direct impact on residential property, thus influencing the construction industry. Consequently, both government and commercial banks have started reducing rates to 10.5%, from 12.5% at their peak, and the rate is expected to decrease further.³⁷ This will affect the real estate industry. Adding to the lowered interest rates, the exemption for the counter-veiling duty (CVD) on cement and TMT³⁸ bars was removed. Since cement and TMT bars are essential components for construction, construction prices have gone down by

³⁴NNA.Asia.com (2009).

³⁵The Financial Express (2009).

³⁶Reserve Bank of India.

³⁷Idem.

³⁸Thermo-mechanically treated (TMT) steel, which is high-strength steel that has superior properties and meets the highest international quality standards.

almost 5%.³⁹ After the downturn in residential construction during 2002 and 2003, the industry marked high growth as a result of increased disbursements of bank loans for the purchase of houses. Total housing loan disbursements to individual owners and builders/developers went from \$5.8bn in 2002 to \$54.7bn in 2007.⁴⁰ Notably, there has been a rise in urban housing stock, primarily due to increased urbanization, which is currently at 29%, and is expected to reach 41% by 2021.⁴¹ However, there is still a serious housing shortage in India. The shortage has increased from 21.2 million units in 2002 to 51.2 million in 2008, and is expected to grow to 90.2 million by 2012.⁴²

As such, India has a huge demand for skilled construction workers. According to several newspaper reports, there is a 30% shortage of skilled construction workers and a particular shortage of those with technical skills as well as experienced project managers.⁴³ According to the Human Resource manager at Maytas, the shortage of skilled construction workers is a threat to the company, as it not only slows down the growth of its profits, but it has also negatively influenced the development of cities and urban areas, such as New Delhi, Chennai, Hyderabad, Mumbai, Bangalore, and Kolkata. Construction is less attractive than other sectors for university graduates, as the pay is irregular and it involves physical labor. University graduates prefer to work for ICT companies, where they enjoy higher salaries and a better working environment. Moreover, construction work shifts from place to place as projects are completed. As observed in case studies, rural youths tend not to like to move, as this means leaving behind family in the village or hometown. However, considering the market growth and labor shortage, it is recommended that EGMM and training centers invest in training youth in construction, providing them with sophisticated skills to meet market demands.

³⁹Istockanalyst.com

⁴⁰The Planning Commission of India.

⁴¹Idem.

⁴²Reuters (2008).

⁴³Articlebase (2008).

The acquisition by construction workers of more developed skills is important, as the residential construction sector, whose customers are more demanding than those in office building construction, is growing. Between 2002 and 2008, New Delhi, Hyderabad, Mumbai, Gurgaon, and Bangalore emerged as the major centers of residential property development in India. In 2008, these top five centers of growth alone accounted for 86.6% of residential construction.⁴⁴ New Delhi and its surrounding cities accounted for 49.1% of this, followed by Hyderabad with 17.3% and Mumbai with 11%.⁴⁵

In addition, the Jawaharlal Nehru National Urban Renewal Mission (JNNURM), an extensive urban modernization plan of the Indian government in operation across 63 cities in India, is adding to residential property development in each of these cities. It is predicted that between 2009 and 2012, the growth centers with the greatest propensity for residential construction activity will be the metropolitan areas of New Delhi, Mumbai, Kolkata, and Chennai and their adjoining cities.⁴⁶

Section 3. The Pharmaceutical Sector

India's pharmaceutical industry is gaining importance both nationally and internationally. Domestically, demand is increasing due to the growth of the population, including the aged population. The growth in income of the middle class is also contributing to it. Many foreign pharmaceutical companies outsource production in India on account of its low wage cost. Between 1996 and 2006, nominal sales of pharmaceuticals were up 9% per annum, while the global pharmaceutical market was up 7%.⁴⁷

Between 1996 and 2006, the pharmaceutical sales in India were expanding with annual growth of 9%.⁴⁸ However, since 2005, India has been struggling to develop the

⁴⁴PMR (2009).

⁴⁵Idem.

⁴⁶Idem.

⁴⁷Deutsche Bank (2008).

⁴⁸Idem.

industry due to an international patent agreement that protects drugs for 20 years. According to the World Health Organization (WHO), India is the fourth largest producer of pharmaceuticals and 66.7% of its exports go to developing countries. Until the start of the Trade-Related Aspects of Intellectual Property Rights (TRIPS), India maintained low drug prices because of a law that allowed companies to produce cheaper versions of patented drugs. However, there are several factors which should positively support the growth of India's pharmaceutical industry in the near future.

First, there are 60 production locations in India that are certified by WHO.⁴⁹ WHO certifies locations which meet the quality standards set by the U.S. Food and Drug Administration (FDA). This certification is essential in selling goods to the U.S. as well as to other developed countries. These locations attract foreign companies to establish factories and laboratories with low-wage staffs. Wages in India are about 30% of those in Europe and 20% of those the U.S.⁵⁰

Secondly, the middle class, which drives producers and investors in the pharmaceutical sector, is expanding due to a rapidly increasing population and high GDP growth rates. Furthermore, the growing population indicates that the government will be faced with demands to quickly implement a rigid healthcare system to deal with the health problems of the aging. According to WHO, life expectancy in India is between 64 and 66. The United Nations estimates that the share of the population over the age of 65 will rise from 5% currently to 8% in 2025. This means that there will be a great demand for treatment of age-related illness, and of general illnesses like food poisoning and influenza, which older people easily get. The large migration to urban areas will also add more sickness. A similar fact was reported that the middle-class population in India will increase to 580 million by 2025.⁵¹ In general, people with higher incomes are more aware of their health conditions and

⁴⁹KPMG (2006).

⁵⁰Idem.

⁵¹Bright Horizons Family Solutions (2009).

more likely to be in the market for pharmaceuticals. Currently, only 11% of the Indian population has health insurance.⁵² Having health insurance leads people to buy more medicines through their doctors. However, this does not mean that financially poor Indians do not have access to medicine. The government provides medicine free of cost for the SC and the ST.

Deutsche Bank (2008) estimates that drug sales in India will rise an annual 8% between 2006 and 2015. This compares with a global rate of 6%. Despite the current unfavorable situation for India due to TRIPS, there are positive aspects of India's pharmaceutical industry, as described previously. Therefore, it is worth encouraging rural youths to work in the pharmaceutical sector, e.g., as salespersons, for which they would need to know the names of drugs and basic English. Also, the ability to read and understand prescriptions would be an advantage for those wanting to work as secretaries or hospital assistants. Additionally, medical insurance companies need workers with English and computer skills.

Section 4. The Fast Food Service Sector

Despite the severe blow to many industries from the financial crisis, the fast food industry is looking bright. McDonald's is the leading company in the industry. It has 160 restaurants in India and 18% of the fast food restaurants in north India.⁵³ Another 60 restaurants were scheduled to open in 2008 and 2009.⁵⁴ McDonald's has been able to take advantage of the global recession, as people seek cheaper food, though McDonald's is indeed cheap or relatively cheap only in urban areas. With the profits it makes, McDonald's is opening new restaurants every month in developing countries, like India, where urbanization is accelerating.

⁵²Cohen (2006).

⁵³McDonalds India (n.d.).

⁵⁴Relia (2009).

Chapter 6. Policy Recommendations

Section 1. Recommendations for the EGMM Job Training Program

Improving the educational and skill levels of workers is critical in rural development. The relevant skills include not only technical skills but also an adaptable and flexible business mindset. EGMM has been deeply committed to accomplishing its objective, which is to provide families with a job for one of their youths in order to reduce poverty, and to do so in a way that meets market needs. Youth constitute valuable human capital, and employment-generating organizations need to target economically vulnerable youths to get sufficient funding to expand the missions of these organizations. This is what EGMM has been endeavoring to accomplish. With increased funding and investment, EGMM would be able to accelerate its efforts by improving in the areas discussed below. And indeed, now that the program has been successful in mobilizing great numbers of people, EGMM needs to focus on improving the quality of the job training programs.

(1) The Textile Job Training Program

The EGMM training centers have been providing effective and well-rounded training courses overall. The satisfaction level of hiring companies is high. However, due to increased production, what is required in each production line is not so much competence, e.g., in completely sewing one shirt, as practiced at the training centers, but speed. Therefore, it is recommended that EGMM implement a more rigorous textile job training program to increase the competitiveness of the trainees.

(2) The Construction Job Training Program

According to survey interviews conducted by the author of this paper in February 2009, construction trainees have been experiencing a skill gap between what they learn at the training center and their actual work situation. Also, based on the market analysis of the construction sector, presented in Chapter 5, it is recommended that construction companies,

EGMM, and the National Academy of Construction⁵⁵ study what construction training centers in developed countries are teaching and how they are teaching it. One thing that would be beneficial is acquiring skills in constructing buildings that can withstand earthquakes and other natural disasters from some of the countries where they most often occur, as these skills are relatively advanced. Training programs in other countries that would be worth looking at include:

- Construction Craft Training Center, California, U.S.A.⁵⁶: This training center provides programs in construction crafts, safety, electrical certification and etc.
- Assistance for Infrastructure-related Japan International Cooperation Agency's Training Programs⁵⁷: There are several governmental organizations and private companies which work in cooperation with the Japan International Cooperation Agency (JICA), to set up training programs for technical cooperation and the transfer of technical knowledge/skills in construction management. This program is one example of such programs which was offered for free of cost to participants from developing countries in 2002. It is recommended to look for training programs offered by foreign aid agencies.
- Education for Employment Foundation, Egypt⁵⁸: It has similar objectives and goals to those of EGMM. They provide construction training programs to financially vulnerable youths. It is recommended to network and exchange information from similar organization which is successful in both increasing numbers of employed and providing quality programs.

⁵⁵ A government-operated construction training center. It collaborates with EGMM.

⁵⁶ The website of this training center is <http://www.cctc.edu>

⁵⁷ The website of this training is http://www.kkr.mlit.go.jp/en/topics_jica.html

⁵⁸ The website of this training is <http://www.efefoundation.org/index.php?m=3&s=1&t=3>

(3) The English and Work Readiness Job Training Program

EGMM collaborates with the British Council, located in Chennai, in designing programs and producing textbooks for this program, which focuses heavily on the development of oral communication skills. However, based on survey interviews conducted by the author in February 2009, 43% of trainees in this program mentioned that they need more developed communication skills. It was observed during the field visit that most of the classes were teacher-led, in which students merely responded to the teacher's questions and those students who were active in responding tended to sit in the front rows of the classroom. The following improvements are recommended for the English and Work Readiness Job Training Program:

- (i) Train trainers leading the class to focus more on nurturing critical-thinking skills. It is important that the trainers listen to students' opinions first rather than leading the class with their own answers and opinions.
- (ii) Have a diary exercise. Written exercises are essential in improving oral communication skills, as they help stimulate thinking in the language. A diary exercise is an assignment in which the trainer provides a different topic each day and students are encouraged to write their opinions freely.
- (iii) Have students watch short English-language films in the classroom to develop listening skills was popular with both trainers and students. This is a good exercise for providing students with the opportunity to listen to native English. However, it is recommended that some of the films be replaced with films that have educational messages, e.g., showing how people cope with stressful days. This can help prepare students for jobs in the cities.
- (iv) Encourage EGMM to hire trainers who understand youth from poor backgrounds. It is encouraging for the trainees to have trainers they feel can understand their situation. However, more funds need to be allocated to improve the quality of trainers and/or to hire trainers who are experienced in adult education.

Section 2. Recommendations for EGMM Strategy and Management

(1) Counseling/Mentoring Services and Alumni Networking

Newly trained youths working in a city face challenges coping with city life, and these challenges increase homesickness, which leads some youths to leave their jobs. In order to facilitate adjustment to city life and the working environment, it is strongly recommended that EGMM strengthen its networking system of alumni who can provide peer counseling. In order to make this counseling service more widely available, there needs to be a better system of alumni tracking. Considering that not everyone has easy access to the Internet and that, among those who do, not all are familiar with updating their information on the website, it is recommended that a data-entry system be established that can be accessed through a mobile phone.

A Canadian company, Techneos System, Inc.,⁵⁹ which has experience in India, provides expertise and technical services for mobile-phone-based surveys. A company such as Techneos could be a good resource in implementing a new survey and tracking system methodology, although a budget for this would need to be established. Data from a phone survey could be also used in conducting future impact evaluations aimed at improving the job training programs.

In 2008, as its initial attempt at networking with alumni, EGMM held “The Alumni Meet” and gathered about 100 youths who had been working in Hyderabad over the previous 6 months. About 20 youths who had recently completed the training program and were to be placed in jobs also participated in the event. Events such as this provide valuable information to youths who will soon be joining companies. Given that 25% of the youths from villages get their information about careers from their families and 12.5% from other youths who have been through job training programs⁶⁰ (see Chapter 3, Table 9), it is recommended that

⁵⁹The website of Techneos System is <http://www.techneos.com>

⁶⁰These figures are based on survey interviews conducted by the author in February 2009.

the alumni events be held more often, especially those which are held at the training centers. EGMM is often able to get successful youths to come to these events to share their stories, which may motivate youths to join the program. It is important that the employed alumni who are represented have roughly average salaries, skills, and background. Success stories constitute the most useful information for motivating untrained youths to join the training program. However, people learn more from mistakes, so it is valuable for stories of both success and failure to be recounted. Additionally, a counseling/mentoring service for females is needed, as young women have more difficulty finding accommodation and dealing with male supervisors.

(2) Business Areas to Be Focused On

As discussed in Chapter 4, it is recommended that EGMM improve the English and Work Readiness Program and the Construction Job Training Programs. (See Chapter 4 for details.) Local opportunities also need to be explored in these programs, especially for young women who have been forced to quit their jobs because of marriage. Entrepreneurship in India is booming and although most of the entrepreneurs are small, they tend to be socially motivated and sensitive to local needs. Thus, it might be worth developing ties with smaller-scale entrepreneurs in rural areas.

On the contrary, it is highly recommended to suspend the Gems and Jewelry Job Training Program which had the lowest efficiency or SRI (28.50%) and the highest dropout rate (10.07%).

(3) Improving Market Analysis and Promoting a Good Professional Ethic

It is recommended that market research analysts be hired to facilitate development of a more market-driven job training program. Also, EGMM has a responsibility to the society to ensure that its graduates work only with companies with high standards in work ethics. Participating companies must satisfy not only domestic labor laws but also the global labor regulations defined by the International Labor Organization (ILO). As a government body

which has initiated one of the largest and most original employment-generation systems in the world, EGMM has the potential to influence companies to enforce high standards of professional ethics and to reduce the exploitation of vulnerable workforces.

(4) Improving Information Dissemination

There needs to be a standard or guidelines for updating data on the website. Currently, interpretation of the data varies among districts, and this is creating inconsistency in the data. Also, to be interpreted correctly, all documents and information need to indicate the date they were produced.

Section 3. Recommendations for Future Studies

(1) General Impact Evaluation

It is strongly recommended that an impact evaluation be conducted in line with an econometric approach rather than by conducting a qualitative assessment. Two research methodologies are introduced for this purpose in Chapter 7. EGMM has conducted several impact studies, but its results were based on nonrandomized samples, and this may have led to biased results.

(2) Impact Evaluation for Females and Community Perspectives on Female Enrollment in Job Training Programs

It is recommended that an impact evaluation be conducted focusing on perceptions of community members and of young women in the program with regard to female employment and enrollment in job training programs. As mentioned earlier, the participation of young women is supported by SHGs at the village level. However, survey interviews conducted in February 2009 by the author indicate that there are obstacles to young women enrolling in the job training program because of biased notions about women's employment. It is well known that giving money-management and earning opportunities to female family members will increase household income and the educational opportunities of their siblings

and children. Therefore, it would be beneficial to conduct research on how women have brought changes not only to family income but also to their own behavior and to that of their communities.

Chapter 7. Future Impact Evaluation

Previous chapters discuss the current situation of the EGMM Job Training Program and how it can be improved based on samples from two districts in particular and 130 qualitative interviews comprising case studies. It is important for the government of Andhra Pradesh and EGMM, as well as the World Bank, to conduct an impact evaluation which measures and assesses the program with samples that are reflective of the population. There are two reasons for this: one is to avoid biases that are subject to certain special cases; the second is to limit errors.

It is recommended that the following two impact evaluations be conducted for future analysis.

(1) Impact evaluation on household income and changes in villages

The methodology used on this research was not a complete randomization due to resource and time limitations. The training program will celebrate its fifth anniversary in 2010. Therefore, it would be a good idea to plan an impact evaluation to measure how far EGMM has succeeded in reducing poverty over the past 5 years.

(2) Impact evaluation on attitudes of women, their families, and community

The program is not only aimed directly at youth, but it is also aimed indirectly at their families, in particular their mothers-in-law and husbands (or other male members of the family), to address the principal-agent phenomenon and to ensure that families are aware of potential ability of the female members to work. Being able to work and hold down a job not only promotes women's empowerment and gender equality in the household and in society,

but it also contributes largely to increase household income and effective investment, such as that in education. In light of this, impact evaluation focusing on girls would be of great interest, not only for the state government but also for the World Bank, which is endeavoring to promote gender empowerment as one of the UN's millennium development goals.

Section 1. Literature Review and Randomization

The job training evaluation design literature focuses largely on the impact of randomization. Ashenfelter and Card (1985) argued that randomization is necessary to reliably determine program effects. The authors' econometric nonexperimental design used the earnings histories of CETA participants to estimate the participants' longitudinal earnings, from which the authors attempted to discern that program's effects. However, the authors found that the estimates were very sensitive to the model of participation, such that impact estimates ranged from \$200 to \$2,000. Given the significant variation in estimates, the authors recommended that job training evaluations use experimental designs with randomization.

LaLonde (1986) compared the earnings effect of an employment program that was run as a field experiment, with random assignment to earnings-effect estimates from an econometric model. Compared to the experimental results, the nonexperimental design produced positive, larger effects for females, and negative, smaller effects for males. LaLonde concluded that many econometric procedures do not replicate experimentally designed results, and therefore, researchers should be aware of the potential for specification errors when using a nonexperimental design to evaluate job training programs.

Fraker and Maynard (1987) also empirically compared experimental and nonexperimental designs in evaluating job training programs. The study's nonexperimental design utilized a comparison group constructed from the Current Population Surveys. The authors found that nonexperimental designs are not reliable to evaluate job training programs

because estimates are sensitive to the model and to the comparison group's construction methodology.

Lee (2005) discussed the metrics used in job training evaluation—specifically, the calculation of earnings and treatment effects. Lee noted the selection problem with using earnings as an outcome measure: wage rates are only observed for those who are employed, but employment status itself could be affected by participation in a job training program. Hence, Lee proposed a “trimming” procedure for bounding average treatment effects, given this sample selection problem.

Section 2. Sampling Method

A full-day training session for 3 months will be provided, except for the Security Guard Job Training Program, which lasts for 2 or 3 weeks. It is expected that after training, the youths will be employed in the private sector. Their work conditions, monthly salaries, and work hours will be recorded.

The target population will be both males and females aged 18 to 27 who are either unemployed or employed in unorganized sectors. These are the eligibility criteria for the EGMM program. Although training for the construction sector does not limit eligibility to ages 18 to 27, studies of those involved should draw their sample population only from youth between these ages in order to increase internal validity.

The success of the program in promoting itself through its outreach efforts varies according to area. However, it is sufficiently well known in the program that there is a potential unintended consequence of people quitting their current jobs in order to be eligible for the training. People might want to quit their jobs because they want a less risky job or

simply because they would prefer a different workplace.⁶¹ The goal of EGMM is to connect education and employment, and it is not intended to provide a mere opportunity to increase personal satisfaction. To address this concern in research, the best way is to choose incentives that would encourage participation among the unemployed and underemployed but to have incentives that would be insufficient to appeal to employed people. However, since this impact evaluation will evaluate a treatment that has already been implemented, surveys of the sample population will be conducted to ask the reason for participating in the training.

The pretest and part of the posttest have already been conducted by EGMM, and all of the data is being inputted into the EGMM data bank. However, the data was acquired without knowing that this impact evaluation would take place, and data is available only for after 2008. Still, the pretest and original datasets collected before the training will be an appropriate data source, given the limited data availability and feasibility of obtaining new pretest data.

Section 3. Experimental Design

Under ideal experimental conditions, the researchers would, with collaboration from EGMM, identify all youth who are eligible for job training. The job training would be provided to the youth free of cost and a stipend would be provided to allow the most impoverished youth, as defined by EGMM, to enroll in the program.⁶² On a random basis, half of the eligible youth would be assigned to receive job training, and the other half would be assigned to the control group and would not receive training. For both control and treatment groups, one pretest would be administered before the treatment, and two posttests would be conducted after the treatment to increase the accuracy of the data.

⁶¹Case interviews conducted with trainees in the EGMM Job Training Program in February 2009 indicated that there were a small number of people who quit their jobs in order to join the program or who reported a false educational or work background in order to be eligible.

⁶²Stipends are not provided by EGMM. However, to control for biases derived from economic status, it is recommended that a stipend be provided for the poorest of the poor.

Full randomization is not possible in this case because this program has been in operation since 2005 and 225,332 youths have already participated in the training. It is plausible that the youth who have not yet received the treatment differ from those who have completed the training. The former may be less motivated to receive job training, or they may have such restrictive budget constraints that they cannot participate in activities that do not immediately generate income. However, as there is strong support in the literature for experimental studies to evaluate job training programs, an experimental design will be used. A 4-month evaluation period (applying the same timeline as the impact evaluation of the World Bank, conducted between January 2009 and May 2009, and considering the budget) is proposed below. The timeline is set, occurring from June 2009 to October 2009.

Within the population of youth in AP who have not yet received treatment, assignment to treatment and control groups will be done on a random basis. Given that it would be unethical to deny this treatment to the control-group youth, a “wait list” design will be used, and the control group will consist of youth who are on the wait list. These youth will not receive the treatment until November 2009, whereas the treatment group will receive the training immediately, starting in July 2009. Pretests will be conducted in June 2009 prior to the randomization process, and posttests will take place in November 2009 upon conclusion of the treatment. With sufficient funding, the study population can continue to be followed for the long-term effects of job training by conducting a second posttest in May 2010, which would be 6 months after the first posttest.

Table 12

Pre- and Double-Posttest Calendar for the Experimental Design

Youth Number	Pretest	Treatment	Posttest or Treatment	Posttest
	Jun-09	July-Oct 2009	Nov-09	May-10
1	✓	Construction JTP	✓	✓
2	✓	No Treatment	District Model JTP	✓
...
1998	✓	No Treatment	No Treatment	✓
1999	✓	Textile JTP	✓	✓
2000	✓	No Treatment	Security Guard JTP	✓

Note. JTP–Job Training Program

Sampling method and estimated sample size: The samples will be selected by clustering by job sector and then stratifying by household income based on the pretest, such as APL, BPL, and POP. In calculating sample size, several criteria were taken into account. First, because this is an innovative job training program in an impoverished country, there must be more concern about mistakenly missing a result than finding a false causal effect. In general, employment conditions and levels of job training in India are low in terms of quality. Under such conditions, being certain that the job training is successful in enabling the youths to find employment in the organized sector is more important than being certain that the job training has some effect in improving the income level of youth whose household income is approximately Rs. 1,500 per month or less. This is because finding a job in the organized sector has sustainability in increasing income. With this in mind, and given that there is much youth frustration due to the disconnect between education and job opportunities, alpha—which reflects the likelihood that the program is ineffective—was tightened to 0.01. Beta reflects the likelihood of inadvertently missing a real effect, and was set to 0.8, which is a general standard. These standards were used to calculate the sample size needed to find a significant F-statistic, using a chi-square test for main effects and interactions. A chi-square is

appropriate, as the samples are clustered into six major job training program categories: English and Work Readiness, Textile, Security Guard, Construction, District Model, and Compute Graphics or other programs, such as Accounting if Skylark is not applicable, depending on the district. The F-statistic would provide an indication of which job training group has experienced the largest effect.

Table 13 summarizes the sample size needed under different conditions. The major assumption concerns the expected effect size. Unfortunately, there is no data on the basis of which to hypothesize an effect size. However, as the chi-square method applies, in this case, it is suitable to take standard Cohen’s *d*, where 0.2 is small effect size, 0.5 is medium, and 0.8 is large.

Table 13

Sample Size Under Different Assumptions

Effect size	0.8 (Large)	0.5 (Med.)	0.2 (Small)
Alpha	0.01	0.01	0.01
Power	0.8	0.8	0.8
Number of groups	6	6	6
Degrees of freedom	4	4	4
Sample size	67	186	1675

Given the time period for the evaluation and severely limited human and financial resources, 67 training centers should be included from the sample. (See Table 13 above.) Each training center has approximately 30 participants on average, making the sample size around 2,000.

Survey modality: A combination of in-person and phone interviews will be used. Because literacy level varies among people and many people in rural areas of India do not have a telephone, in-person interviews are the best way to conduct a survey such as this, especially

for a pretest survey in which most of the participants are being contacted for the first time about the EGMM Job Training Programs. For the posttest, phone interviews will be used, because they are more time- and cost-saving, and more convenient for most employed youth, who have phones. Given the gender sensitivities involved, female interviewers will interview women, and male interviewers will interview men.

The in-person interviews will take place in the respondent's homes. Every effort will be made to ensure that the interviewees do not feel nervous or distracted by family members. For example, the interviewers should request that the interview be conducted away from other family members and villagers. The interviewers will inform interviewees that none of their responses will be disclosed to relatives or members of the community.

Survey construction: The pretest will capture data, including name, age, gender, caste, individual and household income, household size, individual and household educational backgrounds, household job training and work experience (number of years and sectors of employment), diversification of expenditures, and amount and destination of remittances. The pretest will also gather self-reported data regarding employment and employability, such as perceived obstacles to employment, perceived preparation for employment, and perceived attainability of job satisfaction. The posttest conducted at the completion of the training will measure employability and job-readiness through self-reported data. Additionally, if suitable and available for the participant's job sector, a job aptitude test (e.g., a typing or computer skills test for the BPO sector⁶³) will be administered. The posttest will also include a brief training center evaluation, in which participants can evaluate the elements and personnel involved in the training. The first posttest in November 2009 could measure only employability and job-readiness, as it would be administered only a month after the training has concluded, at which point it would be too soon to measure the effect of the training on employment or income. Hence, if the budget allows, the second posttest, in May 2010, would

⁶³See footnote 7.

measure the impact of the job training on outcomes such as employment and income as well as amount of remittances and diversification of spending.

A list of questions and the format for the pretest survey and posttest surveys are shown in Appendix F.

Bias concerns: This design presents some threats to validity. As discussed previously, if the research question is to evaluate the effectiveness of the job training program on *all* eligible youth in Andhra Pradesh, then the study population is biased in that it does not include youth who have already received the treatment and who may have been more motivated or capable of receiving the treatment than those who were included. Secondly, there is a threat of experimental mortality: because the study assigns youth to treatment randomly, it is possible that some of these youth may withdraw because the timing is not optimal for them to engage in full-time unpaid training for 3 months. Finally, external validity in relation to countries other than India or even to other states in India may be weak because of predominant cultural factors such as the caste system and the unique patterns of economic development in India and AP.

Although this design may limit findings because the study population is restricted to youth who have not yet participated in job training, it is proposed as a “next best” experimental design that would, nonetheless, provide valuable data about the short-term impact of job training, such as the job-readiness and employability of individuals upon completing the program. Arguably, even though this population is not representative of all youth in Andhra Pradesh, it is one that would be particularly fruitful to study because it likely represents those hardest-to-reach youth for whom successful job training could have the greatest impact. Moreover, this study will provide important information about the implementation and procedures of the job training program. Since implementation is

sometimes left to each private training center or non-EGMM-led training center,⁶⁴ outcomes may vary significantly according to location. Although there may be a correlation between participants' perceptions of the training services and their perceptions of their own skills and motivation, the participants' evaluations of the training will at least provide some initial information on the strengths and weaknesses of each site.

Section 4. Analytic Technique Design—Alternative Proposal

Given the substantial challenges to the experimental design, an alternate proposal is an analytic technique evaluation using a double difference-in-differences approach. This second proposed design could increase validity because it would capture increased long-term effects of job training. In this design, the treatment group consists of youth who completed the treatment between July 2008 and October 2008, and the control group is youth who are on the wait list but have not yet received the job training. The treatment group's pretest data will be culled from the forms that the participants completed when they signed up for the program in 2008, and the posttest data will be collected by survey during July 2009 and October 2009. Similarly, the control group's pretest data will be collected from the forms they completed when they signed up for the wait list, and the posttest data will be collected by survey along with the treatment group's posttests.

Survey construction: The posttest in this design would address outcomes such as income, gender, age, employment status after training, occupation before the training (if the person worked), household and individual income, household size, and amount of remittances. If budget and human resources allow, the researchers could also collect data from a second posttest of the control group, once they get off the wait list and complete the treatment themselves, in a switching replications design.

⁶⁴These include Dr. Reddy's Foundation and National Academy of Construction.

In order to strengthen validity, propensity matching scores will be used on factors such as age, gender, caste, educational level, work experience, and household size.

Sampling method: The sample will be randomly selected from the 2,000 youth eligible for the treatment group, and there will also be a comparison group of untrained waitlisted youth (The sample size was calculated in the same manner as was the first experimental design; see Chapter 4, Section 1.). The treatment and comparison groups will be stratified according to educational level. The five monthly income levels are: (1) below Rs. 700, (2) Rs. 700–1,000, (3) around Rs. 1,000, (4) Rs. 1,000–1,500, and (5) Rs. 1,500 and above. The use of these five strata will eliminate 90% of the variance. Stratifying the youth will also allow us to aggregate findings in order to make more general claims, as well as piece out findings in order to explore the more specific effects on certain segments of the population.

Table 14

Pre- and Posttest Calendar for Analytic Technique Design

Youth Number	Pretest	Treatment	Posttest or Treatment
		July-Oct 2009	July-Oct 2009
1	✓	Textile JTP	✓
2	✓	No Treatment	✓
...
1999	✓	Construction JTP	✓
2000	✓	No Treatment	✓

Note. JTP–Job Training Program

Bias concerns: The problem with this alternative option is that it introduces a number of threats to the validity of the study. In specifying and selecting the study sample for this specific evaluation, there are two main biases. First, there is centripetal bias, as the reputation of certain districts or training centers may cause eligible youth to gravitate towards those that

meet their interests or needs over others. For example, less-educated individuals may choose a job training program that specializes in the construction or textile programs, as these programs accept illiterate youths. If this particular job training happens to be less effective than the other sector-specific job trainings, then the individuals involved may face unemployment, as they will have both a lack of education and less-effective training. In addition, there is start-time bias, because various training centers do not have the same start date. It may make sense to choose centers that start on the same date in order to make analysis easier. However, this could be problematic because a certain type of training center could choose to start on a certain date, leaving other training centers unstudied and without policy recommendations. Furthermore, in executing the experimental exposure, the study faces two more biases. The first is contamination bias, in which the control group could be receiving training or assistance, or the treatment group could be receiving additional training or assistance without our knowledge. Also, individuals who leave the study may differ greatly from those who remain in the study. This second type of bias is known as withdrawal bias and is prevalent in cases such as this, although the study tries to address it through multiple controls that include those receiving partial training. In measuring exposures and outcomes, one primary bias is possible: obsequiousness bias may lead individuals to provide answers that they believe are wanted, rather than answers that are truthful. This may especially be true for waitlisted individuals who believe that their answers may affect how soon they will be enrolled.

Other options: The One-Group Posttest-Only Design was rejected because the effect must be large, and all possible alternatives must be known or nonexistent, which is not the case in this study. Also, a regression discontinuity analysis was considered, but data is not available for youth below age 17 or above age 27. The One-Group Posttest-Only Design Using Multiple Substantive Posttests was also rejected because the effect must be known and the cause must be unknown, but the effect is unknown. In addition, the Removed-Treatment Design is

unethical, and the Repeated-Treatment Design is not feasible. The Posttest-Only Design with Nonequivalent Groups was rejected because the study would be faced with separating treatment from selection effects. Finally, all of the Time Series Designs were rejected because of the specificity of the program and the difficulty in obtaining so many data points. It would be very costly and time-consuming to execute this design.

Section 5. Impact Evaluation on Women's and Community's Perceptions of Women's Enrollment in the Job Training Programs

This study also seeks to analyze a further process that is relevant to vocational training programs designed to expand job opportunities in other regions in India. It is proposed to research impact related to gender separately from the general impact evaluation, the design methods of which were introduced in Section 3 and 4 of Chapter 7. Because people in India tend to be culturally sensitive to issues of gender, taking this into account is essential to assessing the implementation and development of job training and employment-generation programs.

(1) Incentives for Women to Participate

Women in India have limited decision-making power over their occupation, with regard to questions such as whether they should work or which job they should take. For this reason, it is important to analyze how women can be incentivized to participate in job training, or how other family members can be incentivized to increase female participation in job training given that women have limited decision-making power regarding employment. Observing differences in gender participation in different job sectors through an experimental evaluation, supplemented by a qualitative analysis of surveys is proposed. The basic conclusion of this study is that the EGMM Job Training Programs increased women's empowerment.

(2) Evaluation Methodology

For this purpose, the same methodology introduced in the general impact evaluation described in Chapter 4, with certain differences, is applied.

Target population: Although the study is about perceptions of women's employment, all eligible youths, both male and female, from vulnerable economic backgrounds are targeted. In addition, the survey will be conducted with community members, including parents. The program is not only aimed directly at youth but also indirectly at their families, in particular their mothers-in-law and husbands (or other male family members), in order to address the principal-agent phenomenon and ensure that families are aware of the young woman's ability to work. Being able to work and have her own job not only promotes a woman's empowerment and gender equality in the household and in society, but it also contributes substantially to increasing household income and effective investment, such as spending on education.

Estimated sample size: The sample size was calculated using the same method presented in Chapter 4. However, there are some differences from Chapter 4, where the samples were clustered in six different job training programs. However, in this study, in order to observe what induces women to enroll in the job training programs and what renders the communities and the women's families supportive of their being enrolled, the following six groups are introduced for the purpose of providing encouragement to those involved or affected by the job training programs, and the samples are clustered into these six groups:

1. A group for women, the purpose of which will be to explain the importance of their enrollment.
2. A group for men, the purpose of which will be to explain the importance of the enrollment of women.
3. A group for both women and members of the community, the purpose of which will be to explain the importance of the enrollment of women.

4. A group for heads of households, the purpose of which will be to explain the importance of the enrollment of women.
5. A group for members of SHGs, the purpose of which will be to explain the importance of the enrollment of women.
6. No group session is provided.

Survey modality: The study will involve a combination of in-person-interviews and phone interviews, as with the survey to be used in the general impact evaluation described in Chapter 4. In addition, to avoid problems of men influencing their female household members on how to respond during the interview, interviews with women will be conducted prior to the interview with the man or at the same time, so that the actual content of the survey is not revealed until the interview.

Survey construction: The survey has two latent constructs: women's empowerment and their experience with job training. Under the latent construct of women's empowerment, two indicators of women's empowerment are used:

1. Gender roles and women's status, and
2. Decision-making and negotiating power.

There are many other indicators that measure women's empowerment. The above indicators have been chosen because the survey will measure dynamics within the household and the village. As these items are interrelated, the questions will be similar but will use different wording to ensure consistency of responses.

The other latent construct is experience with the job training program. Under this latent construct, different questions will be asked of eligible youths and of community members.

The survey for eligible youths (both untrained and trained) will include two items:

1. Technical difficulties with the job training program, and
2. Level of stress in the household and from community.

The survey for the community will include the following items:

1. Level of appreciation for and understanding of the job training program.
2. Level of stress caused by family members in the household and in the community.

The survey questions for eligible youths and their community members are listed in Appendices G and H, respectively.

Sampling concerns: Nonresponse issues: There might be cases in which a respondent refuses to answer some of the questions or even refuses to participate in the entire interview. In order to prevent a decrease in the sample size, which would affect the validity of the survey, a list of backup respondents with similar profiles will be prepared prior to the start of the interviews to replace the nonrespondents.

Bias concerns: There are some possible sources of bias, including unobservable factors or items that are not included in the survey due to resource constraints. These factors or items can influence the assessment of the survey. Examples of the latter include cultural influences, social stigma, religious background, size of family, level of education of parents, and local political environment.

Chapter 8. Conclusion

The EGMM Job Training Program constitutes an excellent example of how pushing one person per household into the job market provides the fastest and highest return in terms of poverty reduction. A partnership between the private sector and the lowest-income segment of the population is mutually beneficial because it creates employment opportunities for the poor, particularly for unemployed rural youth, while providing the firms with a pool of self-motivated employees.

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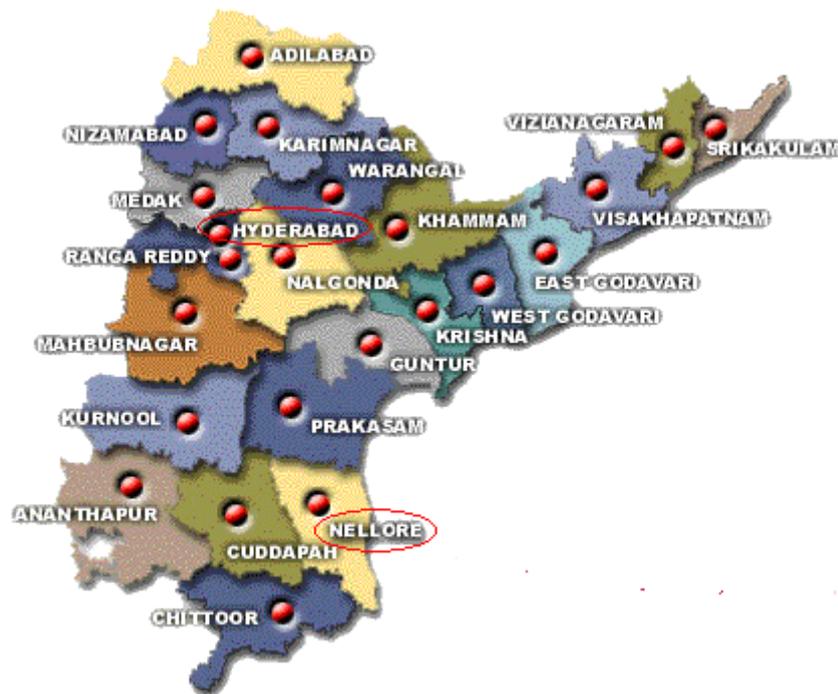
Appendix A. Geography of Andhra Pradesh

AP, which is known as the "Rice Bowl of India," is the fifth largest state in India, with an area of 275,608 km² and a population of 76.21 million. It has a population density of 277/km².⁶⁵

AP consists of 23 districts: Adilabad, Anantapur, Chittoor, Kadapa, East Godavari, Guntur, Hyderabad, Karimnagar, Khammam, Krishna, Kurnool, Mahbubnagar, Medak, Nalgonda, Sri Potti Sreeramulu Nellore, Nizamabad, Prakasam, Rangareddy, Srikakulam, Visakhapatnam, Vizianagaram, Warangal, and West Godavari.

*Districts circled in red were chosen as study districts to conduct survey interviews.

Figure 4. Map of Andhra Pradesh (Map take from aponline.com)



⁶⁵Aponline.com accessed March 10, 2009.

Appendix B. History of EGMM and the Organization

Section 1. History of EGMM

In 2002, a platform of EGMM was formed as one component of a corporate partnership, or the Andhra Pradesh District Poverty Initiative Project (APDPIP), funded by the World Bank. This project worked with the private sector to make a linkage with the poor. The linkage was forged, ranging from procurement of flower and agricultural seeds, to wasteland development with paper companies for papyrus plantations, to the tribe having built a supply chain of organic cotton. At the same time, Dr. Reddy's foundation was starting to take the first step to mobilize and train urban youth for employment. Observing the expansion of Dr. Reddy's Foundation⁶⁶ to the rural areas and its impact on rural youth, the AP state government came to realize that there was a win-win situation among the government, the private sector, and the community, all of whom were involved in directing the efforts of youth to reduce their poverty. The state government mainstreamed these employment opportunities for youth into a special mission called the EGMM.

Section 2. Structure of EGMM

The Executive Committee of EGMM consists of the minister of the state, the head of the Rural Development Department, senior government officers, and the executive director of EGMM, who has experience working in the private sector. All processes of the job training program involve government, the private sector, and community levels, including women's self-help groups.

As an organization, EGMM is headed by an executive director, followed by three state mission managers. In 22 districts,⁶⁷ implementation of the program was executed by a

⁶⁶A nonprofit organization established in 1996 in India. The foundation provides a wide array of vocational training programs to address issues of employability, income generation, and consequent improvement in quality of life.

⁶⁷See Appendix A.

large government scheme headed by collectors,⁶⁸ project directors, the district rural development agencies (DRDAs), project officers, and the Integrated Tribal Development Agencies (ITDAs). EGMM, at the district level, is led by a district project manager who manages one to five assistant project managers. EGMM makes an effort to create a suitable environment for collaborating with the private sector. The state mission managers and the district project managers are hired based on their work experience in the private sector.

In each district, there are 10 to 15 job resource persons (JRPs). These JRPs come from impoverished socioeconomic backgrounds and have knowledge of the life of the poor. This knowledge helps them to identify villages where unemployed youths reside and to mobilize these youths into the training center. To make this whole process function with a community-based approach, EGMM collaborates with self-help groups (SHGs)⁶⁹ at the village level. Members of SHGs are mothers of the unemployed youth, forming groups of 10 to 12 members for activities such as microfinance, knowledge sharing, and village event planning, to name a few. JRPs and the assistant project manager give detailed information to the SHGs to scale up the project.

JRPs and SHG members in the village are the main persons mobilizing financially vulnerable youth into job training programs.

⁶⁸Indian government officials, principal representatives of the administration who act as the principal revenue officer.

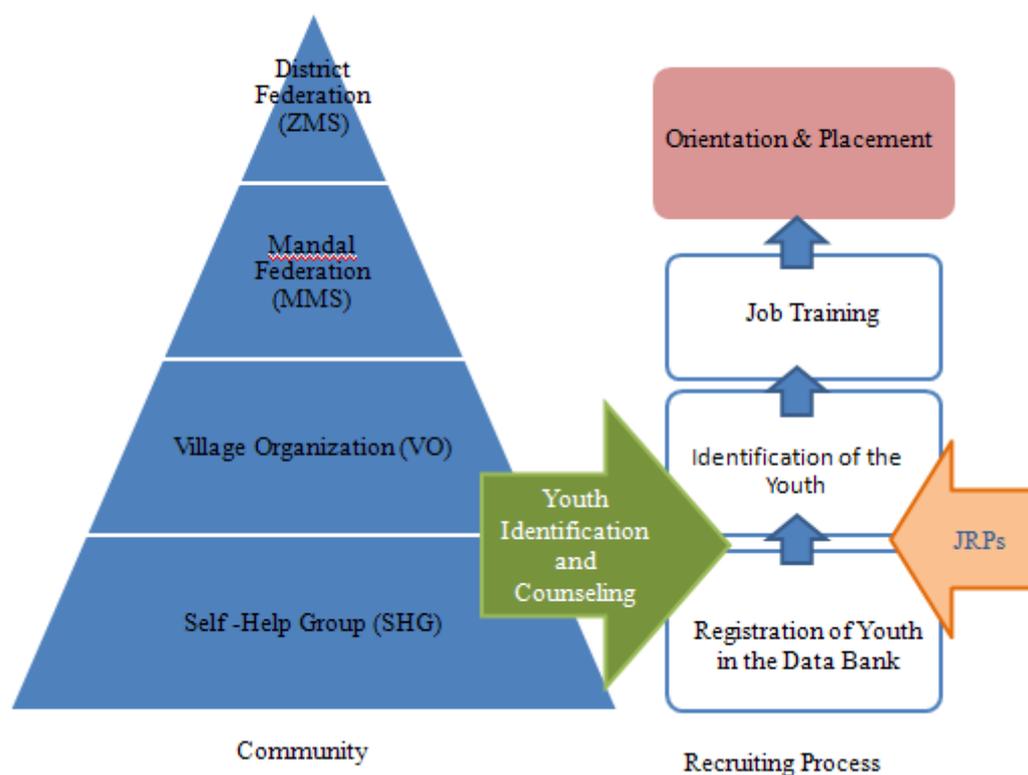
⁶⁹SHGs are usually formed for microfinance activities. The Rural Development Department of AP has a separate body to lead rural microfinance activities.

Table 15

Structure of the EGMM Program

Stakeholder	Position	Role
Executive Committee of EGMM	State department of rural development	Decision-making body Hold several meetings every 3 months
EGMM (state level)	Executive director, state mission managers	Manage programs and budgeting Provide training for partners and project staffs and trainers
DRDA	Collectors	Support smooth implementation
EGMM (district level)	District project manager	Implement and manage programs
	Trainers	Teach at training centers
	JRPs	Mobilize youth with SHGs
Community	SHGs	Mobilize youth with JRPs

Figure 5. Employment Generation Process at the Community Level



Section 3. Funding Sources

The EGMM budget was composed from three sources.

- (1) RIAD—funded by the state government
- (2) SGSY—funded by the government of India
- (3) IKP (Indira Kranthi Patham) funds—supported by the World Bank and partially funded by SGSY

Table 16
Sources of Funding

(Unit Rs. in millions)

Fiscal Year	Sources of Funding			Total
	RIAD (Govt. of AP)	SGSY (Govt. of India)	APRPRP (World Bank)	
2005	-	-	100	100
2006	-	-	200	200
2007	700	428	66.9	1,194.90
2008	875	94.8	39.6	1,009.40

Source: Employment Generation and Marketing Mission (2008).

Appendix C. Questionnaire for the Youth

Section 1. Questionnaire for Trained Youth

1. Socioeconomic Profile

- (1) Age
- (2) Gender
- (3) Marital status
- (4) Caste (BC, SC, ST, FC, or OC)
- (5) Parents' occupations
- (6) Number of household members

- (7) Who is the breadwinner?
- (8) Name of your residential district.
- (9) Educational status

2. Details of Training and Job

- (1) Training of your training program and course
- (2) Hiring company
- (3) Position at the company
- (4) How long have you been employed?
- (5) How long did it take you to get the job after the completion of the job training?
- (6) How did you learn about the job training program?
- (7) Did you have difficulties during the training? What were they?
- (8) Have you been promoted since you joined the company? If yes, after how long were you promoted? What were your position and salary before and after the promotion?
- (9) Do you receive social benefits from the company?
- (10) Do you want to stay in this company?
- (11) Have any of your colleagues left the company? After how many months of employment did they leave? What do you think were their reasons for leaving?
- (12) Do you plan to change jobs or move to another area?

3. Changes in Lifestyle and Income Diversification

- (1) How much were your family's income and your income before starting this job?
- (2) How much were your family's income and your income upon starting this job?
- (3) In what way has your lifestyle improved after being employed?
- (4) How much is/was your loan, if your family has/had any?
- (5) Do you or your family send remittances to your relatives? To whom are you sending them?

(6) What was the total amount of remittances sent by you and/or your family before you were employed?

(7) What is the total amount of remittances being sent by you and/or your family now?

(8) Are any members of your household of school age?

(9) Has anyone in your household started going to school because of your enrollment in the training program or employment?

4. Opinions

(1) Were there any gaps between your expectations and the actual program and employment? Please describe.

(2) What are your challenges at work?

(3) What can be done to improve the job training?

(4) What are the strengths of the program?

Section 2. Youths Participating in the Job Training Program

1. Socioeconomic Profile

(1) Age

(2) Gender

(3) Marital status

(4) Caste (BC, SC, ST, FC or OC)

(5) Parents' occupations

(6) Number of household members

(7) Who is the breadwinner?

(8) Residential district.

(9) Educational status

2. Details of Training

(1) Type of training program and course

- (2) How did you learn about the job training program?
- (3) What kind of job did you have before joining the training?
- (4) Do you feel comfortable leaving your village to work in a different city?

3. Changes in Lifestyle and Income Diversification

- (1) How much were your family's income and your income before being enrolled?
- (2) In what way has your lifestyle improved after being enrolled?
- (3) Do you or your family have any loans?
- (4) Do you or your family send remittances to your relatives? If yes, how much?
- (5) Are any members of your family of school age?
- (6) Is your family investing in the children's educations now?
- (7) Are there any assets that you bought or that increased in value after being enrolled in the training or employed? Please indicate the property and amount.

4. Opinions

- (1) Were there any discrepancies between your expectations and the actual program?
Please describe.
- (2) What can be done to improve the job training?
- (3) What are the strengths of the program?

Section 3. Untrained Youth

1. Socioeconomic Profile:

- (1) Age
- (2) Gender
- (3) Marital status
- (4) Caste (BC, SC, ST, FC or OC)
- (5) Parents' occupations
- (6) Number of household members

(7) Who is the breadwinner?

(8) Residential district

(9) Educational status

2. Details of Training

(1) What is your previous occupation?

(2) How long have you been employed?

(3) Do you want to participate in the job training program?

(4) What kind of skills do you want to acquire through the job training program?

(5) Is anyone of your household member participating/has participated in the training?

(6) What do you expect from the training and employment?

3. Life and Income Diversification

(1) How much is your family's income? How much is your income?

(2) Do you or your family send remittances to your relatives?

(3) How much is the amount of remittances you are sending now?

(4) Do you or your family have any loans?

(5) Is there anyone else in your household who has participated or is participating in the training?

(6) How much do you or your family spend on education?

(7) Do you own any assets? Please name property and amount.

4. Opinions

(1) What kind of changes do you want to make in your living?

(2) Will you stay in your village if you get a job?

Appendix D. Questionnaire for the Private Sector

1. Socioeconomic Status of Interviewee

(1) Gender

(2) Position at the company

2. Opinions on the Business in Relation to the Job Training Program

(1) Do you see any changes in the productivity of your company after employing youths from the EGMM job training programs?

(2) In general, do women in your company have the same level of positions and salaries as men with the same educational background?

(3) Do you find that youths hired through the EGMM Job Training Programs perform better than/as well as/less well than those hired through the usual methods?

(4) What are the advantages of hiring poor youths through the job training programs?

(5) What are the problems involved?

(6) What does the concept of professional ethics mean to you? What efforts is your company making to improve professional ethics?

(7) Do you suggest any changes in the training curriculum? If so, what changes do you suggest?

(8) Do you suggest any changes in the placement process? If so, what changes do you suggest?

(9) Does your company provide social benefits and annual leave to the youth employees?

(10) What is the attrition rate in your company? What is the attrition rate of youths hired through the EGMM job training programs?

(11) What do you think are the reasons for leaving the job?

(12) When hiring youths, what are five qualities or skills that you look for?

3. Opinions on Their Business in Relation to the Economy and Future Prospects

(1) How do you describe the performance of your company in general?

(2) In what way is the current global recession affecting your business?

(3) Please list challenges that your company is facing.

(4) How does the company envision its future five years down the road? Ten years

down the road?

4. Public-Private Partnership

- (1) How do you collaborate with the state government and EGMM? How often do you meet with them?
- (2) What can be done to further improve the partnership?

Appendix E. Questionnaire for EGMM Staff

1. Socioeconomic Profile

- (1) Gender
- (2) Position at work

2. Training

- (1) Do you see any discrepancy between youth expectations and the actual situation of their job training and employment?
- (2) Do you see any differences in market demand/job demand between villages in neighboring states and villages within the state?
- (3) How are the mentorship/counseling system working?
- (4) What do you think is the reason for dropouts?

3. Employment

- (1) Did you see any impact originated from the global financial crisis in recruiting people?
- (2) What do you think are the reasons for attrition?

4. Market Analysis and Future Prospects

- (1) How do you collaborate with private companies? How often do you interact with them?
- (2) How does EGMM conduct market analysis and research?

(3) What can be done to further improve the market research and the partnership with the private companies?

(4) How is the government planning to develop the EGMM Job Training Programs over the long term?

Appendix F. Pretest and Posttest Survey Questionnaires

Note. Questions or words in brackets will be asked for posttests.

1. Socioeconomic Profile

- (1) Age
- (2) Gender
- (3) Caste (FC, BC, SC, ST or OC)
- (4) Marital status
- (5) Occupation of parents
- (6) Number of household members
- (7) Who is the breadwinner?
- (8) Residential district.
- (9) Educational status

2. Details of Training and Job: (This part will not be asked for the pretest.)

- (1) Name training program and course
- (2) Hiring company
- (3) Position at the company
- (4) Monthly salary amount excluding the social benefit and tax
- (5) How long have you been employed?
- (6) How long did it take for you to get a job after completing the training?
- (7) How did you learn about the training?
- (8) Did you have difficulties during the training? Name difficulties you faced.

(9) Have you been promoted since you joined the company?

If yes, after how long were you promoted both in terms of salary and position?

(10) Do you want to stay in this company?

(11) Have any of your colleagues left the company?

How long did they work for the company?

What do you think was the reason for leaving?

(12) Do you plan to change your job or move back to your village or to a bigger city?

3. Changes in life and income diversification (words in brackets are for posttests)

(1) How much are (were) your family and your income (before joining the job)?

(2) (How much are your family and your income after joining the job?)

(3) Do you or your family own land? If yes, how large is the land?

(4) (In what way has your living improved?)

(5) How much is/was your loan, if you had any?

(6) Do you or your family send remittances to your relatives?

(7) How much is the amount of remittances?

(8) Is anyone of your household members of school age?

(9) Does your family have difficulties sending your children or siblings to school? What are the reasons?

(10) (Has anybody started going to school because of your employment?)

(11) (In terms of money how much has it increased for the investment in education before/after the employment or training?)

(12) (Are there any assets that you bought or increased after being enrolled in the training and employed? Please name property and amount.)

(13) (What changes it has brought in your life and your family by the employment?)

4. Opinions

- (1) What is your expectation of the training program?
- (2) (Were there any gaps between your expectation and the actual program and the employment?)
- (3) (What are your challenges at work?)
- (4) What can be done to improve the job training programs?
- (5) What are the strengths of the program?

Appendix G. Survey Questions for Women's Perceptions of Women's Enrollment

Note. Questions or words in brackets will be asked for posttests.

I. Socioeconomic Profile:

- (1) Age
- (2) Gender
- (3) Marital status
- (4) Caste (FC, BC, SC, ST or OC)
- (5) Occupation of parents
- (6) Number of household members
- (7) Who is the breadwinner?
- (8) Residential district.
- (9) Educational status
- (10) (Name of Job Training Program)
- (11) (Name of hiring company)
- (12) How much is the household income?
- (13) (How much is your salary after tax and social benefits?)
- (14) Do you or your family own land? How large is the land?

II. Latent construct 1 Women's empowerment

Item1: Gender Roles/Status of Women

- (1) Name three of your responsibilities in your household.
- (2) Who chose or who will choose your husband/wife?
- (3) Do you think women should have the same legal rights as men? Why?
- (4) Do you think a woman can earn the same amount of money as a man?
- (5) Do you have any community rules that you have to follow relating to men or women's behavior?

Item 2. Women's decision making/ negotiating power

- (1) Who has the final say in the following decisions in your household?
 - (i) Financial and job decision
 - (ii) Birth control and family planning (ex. use of condom)
 - (iii) Children's education and discipline
 - (iv) Other (please specify things that you decide in your household, and things that are decided by your husband, father or brother)
- (2) Who decides what to buy?
 - (i) Household commodities
 - (ii) Food
 - (iii) Clothes
 - (iv) Medicine
 - (v) Others (please specify things that you decide to buy, and things that are decided by your husband)
- (3) Who makes the important decisions in the family?
- (4) Does your father/brother/husband listen to you when deciding important issues?
- (5) What would be your husband's or father's reaction if you disagree with him? Do you try to convince him to change his mind?
- (6) Do you think women should work?
- (7) Do you like to work?

III. Latent construct 2: Experience with the job training program

Item 1: Technical difficulties with the training

- (1) Have you ever faced any difficulties going to the training center? If yes, provide details of these difficulties.
- (2) Is your family supportive of your training program?
- (3) Were you able to attend the training everyday?
- (4) How did you find your classmates and trainers?

Item 2: Level of stress in the household and from community

- (1) Is there anyone besides you who is enrolled in the job training program in your household? Please specify.
- (2) Do you discuss your training program with your family members?
- (3) Do you decide how to spend your time and money earned from the job by yourself?
- (4) (Has your life changed after participating in the training?)
- (5) What (is)/would be the reaction of your family of your employment?
- (6) What (is)/would be the reaction of your community of your employment?
- (7) (Do you think you have changed after enrolling the training program and started working?)
- (8) Who decided that you should enroll in the job training program?
- (9) (Do you enjoy earning income?)
- (10) (Do you think you are respected by your neighbors for earning income?)
- (11) Do you feel comfortable to negotiating with a man as a part of your job or household activity?
- (12) Would you have preferred that your male household member enroll the program?

Appendix H. Survey Questions for Community's Perception of Women's Enrollment

I. Socioeconomic Profile:

- (1) Age
- (2) Gender:
- (3) Caste (FC, BC, SC, ST or OC)
- (4) Marital status
- (5) Occupation
- (6) Number of household members
- (7) Who is the breadwinner?
- (8) Residential district
- (9) Educational status
- (10) Household income
- (11) Do you own land? How large is your land?

II. Latent construct 1 Women's empowerment

Item1: Gender Roles/Status of Women

- (1) Name three responsibilities in your household.
- (2) Who chose or who will choose your husband/wife?
- (3) Do you think women should have the same legal rights as men? Why?
- (4) Do you think women can earn the same amount of money as men?
- (5) Do you have any community rules that you have to follow relating to men or women's behavior?

Item 2. Women's decision making/ negotiating power

- (1) Who has the final say in the following decisions in your household?
 - (i) Financial and job decision
 - (ii) Birth control and family planning (ex. use of condom).
 - (iii) Children's education and discipline
 - (iv) Other (please specify things that you decide in your household, and things

that are decided by your husband, father or brother).

(2) Who decides what to buy?

(i) Household commodities

(ii) Food

(iii) Clothes

(iv) Medicine

(v) Others (please specify things that you decide to buy, and things that are decided by your husband)

(3) Who makes the important decisions in the family?

(4) Does your father/brother/husband listen to you when deciding important issues?

(5) What would be your husband's or father's reaction if you disagree with him? Do you try to convince him to change his mind?

(6) Do you think women should work?

III. Latent construct 2: Experience with the job training program

Item 1: Level of appreciation for and understanding of the program

(1) What are positive things if you send your son or daughter, brother or sister to the training center?

(2) What are negative things if you send your son or daughter, brother or sister to the training center?

(3) Are you willing to send you daughter/sister to the training program?

(4) Are you willing to send your son/brother to the training program?

(5) Do you think you are supportive to the trainees in your household or in the community?

(6) (Were you able to send your children or siblings to the training everyday?)

Item 2: Level of stress in the household and from community

(1) Is there anyone enrolled in the job training program in your household?

Please specify.

(2) Do you discuss with your family members about the training program?

(3) (Has your life changed after participating in the training?)

(4) What (is)/would be the reaction of you of your child/sibling's employment through the program?

(5) What (is)/would be the reaction of your community of your child/sibling's employment through the program?

(6) Who decide to enroll in the job training program?

(7) Would you have preferred that your male household member enroll the program?

