

# **Pre-Analysis Plan:**

## **Economic Education in an Authoritarian Regime**

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### **1 Background**

Can employment and entrepreneurship in poorly developed nations be fostered using educational training programs? Do such programs foster the psychological well being of participants? And, finally, does an increase in employment and entrepreneurship change the willingness of individuals to voice political dissent in an authoritarian regime? We approach these questions by evaluating a large-scale educational youth employment program implemented by the International Youth Foundation (IYF) in Zimbabwe.

Since independence in 1980, Zimbabwe has had a rocky economic history. In the 1980s and 1990s, the country witnessed sustained economic growth. From 2000 onwards, however, Zimbabwe has witnessed a remarkable decline in economic growth. The downward spiral has been attributed to several causes, among them corruption, the eviction of farmers, and the involvement of the Zimbabwean army in a war in the neighboring Democratic Republic of Congo. Meanwhile, political leaders in Zimbabwe have been slow to react, blaming Western forces for the economic malaise.

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The downward economic trend is accompanied by significant political tensions. Since independence, Zimbabwe has held regular elections. The revolutionary Zimbabwe African National Union Patriotic Front (*ZANU-PF*), the key driver behind independence in the 1970s, has been in power since 1980. While early elections were largely deemed free and fair, the election in 2000 marked a turn for the *ZANU-PF*. Witnessing increasing popular resentment, the party resorted to threats and repression to maintain its power. The trend was exacerbated by the creation of the Movement for Democratic Change—a political party that managed to lobby and ultimately defeat *ZANU-PF*’s desired constitutional change.

In the years following the failed referendum the *ZANU-PF* began suppressing and killing opposition supporters. Well-known examples included white farmers who the *ZANU-PF* claimed to be supporting the Movement for Democratic Change. In addition the *ZANU-PF* targeted young activists, MDC supporters, and other opposition figures. Violent intimidations were carried out by a variety of groups, including former independence war veterans. Torture, killings and abductions became a tragic regularity.

In this setting of political and economic turmoil, IYF—funded by USAID, DFID, and Sida—has established the Zimbabwe:Works (ZW) program. The program teaches young Zimbabweans business skills, such as business development and financial literacy. The goal of the program is to foster participants economic success by spurring entrepreneurship and employability. Moreover, the program intends to teach important life skills that aim to increase civic and political engagement.

The present project intends to evaluate the effectiveness of the program regarding economic success and civic engagement. We do so by using a randomized controlled trial that compares the effect of the program among randomly treated and randomly non-treated individuals. To further increase the precision of the valuation, we gather both baseline and endline evidence.

## 2 Intervention

Z:W comprises three distinct modalities to which participants sign up.<sup>1</sup> The first modality provides economic education to entrepreneurs in operation for less than 12 months. The second modality provides economic education to existing entrepreneurs operating for 12 months or more. The last modality is tailored toward individuals that aim to be employed in the private or public sector.

The specific content of the three modalities is given below.

### 1. **Modality 1a:** Business Development Support & Financial Inclusion for *entrepreneurs operating for less than a year*.

- *Content:* This modality includes enterprise development training, combined with targeted life skills training for aspiring entrepreneurs. It also includes facilitation of additional Business Development Support (BDS) services, including mentorship and formal and informal financial services. Participating youth will also access financial literacy training.
- *Length:* The length of the specific components is as follows: The business start-up training will last 1 month, the SME mentorship will last for 6 months, the financial literacy training will last for 1 week, the Inform Savings and Lending (ISAL) group formation training will last for 1 week, while the formal microfinance loan duration will last for up to 1 year.
- *Selection:* The selection criteria for participants are follows: Enterprising youth who have had an enterprise in operation for less than 12 months. Selected youth will meet threshold in the diagnostic tool developed by Z:W. Nominal commitment fees are to be paid by both rural and urban youth beneficiaries of the program.

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<sup>1</sup>Originally, it was IYF's plan to implement four modalities. However, a fourth modality was dropped due to financial struggles of the implementing partner.

- *Target:* IYF aims to have 20 percent of the youth in this modality participating in mentorship programs.

2. **Modality 1b:** Business Development Support & Financial Inclusion for *existing entrepreneurs in operation for a year or longer*.

- *Content:* This modality includes enterprise management and expansion training, combined with targeted life skills training. It also includes facilitation of additional Business Development Support (BDS) services, including mentorship and formal and informal financial services. Participating youth will also access financial services will receive financial literacy training.
- *Length:* The length of the specific components is as follows: Business management & expansion training is scheduled to run 1-2 weeks, SME mentorships are to last 6 months, financial literacy training is to last 1 week, informal Savings and Lending (ISAL) group formation trainings are to run for 1 week and formal microfinance loans may be granted for up to 1 year.
- *Selection:* The selection criteria for participants are follows: Youth who have already operating their own enterprise for more than 12 months. Selected youth will meet threshold in the diagnostic tool developed by Z:W. Norminal commitment fees to be paid by both rural and urban youth beneficiaries of the program.
- *Target:* IYF aims to have 20 percent of youth under this modality to access SME mentorships. In addition, 50 percent shall have been granted formal financing referrals to access to formal microfinance. 20 percent should participate in ISALs to access formal financing.

3. **Modality 3:** Work Readiness Training for *new job entrants*.

- *Content:* This modality includes work readiness / life skills training, and

then facilitated placement into internships.

- *Length:* The length of the specific components will depend on partner and their respective curricula and number of topics covered per day.
- *Selection:* The selection criteria for participants are follows: Unemployed youth that are secondary school graduates, enrolled university students, or new job entrants.
- *Target:* IYF aims to have internship placements between 6 -12 months. In addition, 40 percent of youth trained in work readiness are to participate in internship programs.

## **3 Design**

### **3.1 Population**

The present study takes place in four districts of Zimbabwe: two urban regions (Harare and Bulawayo) and one rural regions (Lupane). Modality 1a and 1b will take place in all three regions, while modality 3 will only take place in the urban regions, Harare and Bulawayo. Beneficiaries to all three modalities were recruited by the implementing partners (IP) in October 2015. The IPs recruited participants through local networks, advertisements and word-of-mouth. Given that all IPs have worked in their respective neighborhoods for years, no specific recruitment problems were foreseen.

### **3.2 Randomization**

List of potential participants were provided to the researchers by the IPs in the Fall of 2016 before the different modalities were to begin. Modalities 1a, 1b and 3 were to enroll 800 participants each. In each modality, individuals were then randomly assigned to

receive the program (treatment) or not (control). We used block-randomization, blocking on age and gender—the only two covariates available at the time of randomization.<sup>2</sup>

### 3.3 Baseline

Before commencing the program, IYF conducted a baseline survey with all individuals either assigned to treatment or control. The survey was implemented in the months of December through February. The survey was administered by a professional survey firm (*NEDICO*). Of the overall enrolled 2,400 individuals, the survey team managed to reach 2,163. The sample sizes for the different modalities are shown in Table 1. Problematically, as the table shows, attrition was higher in the control group. This stems from the fact that individuals were asked to show up at specific points to be surveyed. The reason for this procedure had to do with cost effectiveness as well as to guarantee individuals' anonymity. Control individuals, however, frequently expressed that participation in the survey did not yield them any concrete benefits (despite a small compensation fee). In the endline, we therefore opt to reach individuals by phone and in their home addresses, whenever individuals do not show up. The descriptive statistics of the sample are given in Table 2. As can be seen, balance between treatment and control groups is given for most salient covariates (notably, *Age*, *Female*, *Single*, etc.). The Table thus showcases that randomization succeeded in ensuring highly comparable samples across treatment and control.

### 3.4 Endline

The endline survey is scheduled to take place 6 months after the intervention was concluded. The current plan is to conduct the endline in October 2017. The endline will administer the same survey instrument as was implemented during the baseline. The

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<sup>2</sup>The randomization code is available upon request.

Table 1: Baseline sampling

| <i>Modality</i> | <i>Treatment</i>     | <i>Targeted sample</i> | <i>Participants reached</i> | <i>Response rate</i> |
|-----------------|----------------------|------------------------|-----------------------------|----------------------|
| 1a              | Treatment            | 400                    | 406                         | 102%                 |
|                 | Control              | 400                    | 291                         | 73%                  |
| 1b              | Treatment            | 400                    | 381                         | 95%                  |
|                 | Control              | 400                    | 213                         | 53%                  |
| 3               | Treatment 1 (No PTS) | 250                    | 246                         | 98%                  |
|                 | Treatment 2 (PTS)    | 250                    | 243                         | 97%                  |
|                 | Control              | 500                    | 383                         | 77%                  |

Table 2: Descriptive Statistics of Baseline Sample

|                           | Sample |      | Modality 1a |         |           |         | Modality 1b |         |           |         | Modality 3  |             |         |             |             |         |
|---------------------------|--------|------|-------------|---------|-----------|---------|-------------|---------|-----------|---------|-------------|-------------|---------|-------------|-------------|---------|
|                           | Mean   | SD   | Treatment   | Control | Treatment | Control | Treatment   | Control | Treatment | Control | Treatment 1 | Treatment 2 | Control | Treatment 1 | Treatment 2 | Control |
| Age                       | 26.7   | 4.1  | 28.0        | 4.5     | 27.8      | 4.9     | 27.6        | 4.7     | 26.8      | 4.8     | 25.5        | 2.6         | 25.2    | 2.4         | 25.2        | 2.7     |
| Female                    | 52.8   | 49.9 | 53.2        | 50.0    | 48.5      | 50.1    | 48.3        | 50.0    | 46.5      | 50.0    | 61.7        | 48.7        | 54.9    | 49.9        | 56.7        | 49.6    |
| Single                    | 44.9   | 49.7 | 28.3        | 45.1    | 33.0      | 47.1    | 32.0        | 46.7    | 33.3      | 47.3    | 64.2        | 48.0        | 66.3    | 47.4        | 64.8        | 47.8    |
| Relationship              | 14.6   | 35.3 | 11.8        | 32.3    | 10.0      | 30.0    | 11.3        | 31.7    | 9.4       | 29.2    | 22.2        | 41.7        | 18.3    | 38.7        | 19.8        | 39.9    |
| Married                   | 37.0   | 48.3 | 54.7        | 49.8    | 50.9      | 50.1    | 50.4        | 50.1    | 53.5      | 50.0    | 13.6        | 34.3        | 14.2    | 35.0        | 14.9        | 35.6    |
| Widowed                   | 1.2    | 10.9 | 1.2         | 11.0    | 2.1       | 14.2    | 2.4         | 15.2    | 1.4       | 11.8    | 0.0         | 0.0         | 0.8     | 9.0         | 0.3         | 5.1     |
| Divorced                  | 2.3    | 15.0 | 3.9         | 19.5    | 4.1       | 19.9    | 3.9         | 19.5    | 2.3       | 15.2    | 0.0         | 0.0         | 0.4     | 6.4         | 0.3         | 5.1     |
| Edu: Nothing              | 1.0    | 10.0 | 1.5         | 12.1    | 2.7       | 16.4    | 1.3         | 11.4    | 1.4       | 11.8    | 0.0         | 0.0         | 0.0     | 0.0         | 0.0         | 0.0     |
| Edu: Primary completed    | 3.6    | 18.6 | 4.9         | 21.7    | 6.9       | 25.3    | 5.2         | 22.3    | 8.5       | 27.9    | 0.0         | 0.0         | 0.0     | 0.0         | 0.0         | 0.0     |
| Edu: Secondary partial    | 22.1   | 41.5 | 34.5        | 47.6    | 35.7      | 48.0    | 39.9        | 49.0    | 38.5      | 48.8    | 0.0         | 0.0         | 0.0     | 0.0         | 0.0         | 0.0     |
| Edu: Secondary completed  | 23.1   | 42.2 | 38.4        | 48.7    | 39.5      | 49.0    | 36.5        | 48.2    | 36.6      | 48.3    | 2.5         | 15.6        | 0.0     | 0.0         | 1.6         | 12.4    |
| Edu: Post secondary       | 10.9   | 31.2 | 9.1         | 28.8    | 5.5       | 22.8    | 8.1         | 27.4    | 6.1       | 24.0    | 16.5        | 37.2        | 11.4    | 31.8        | 18.5        | 38.9    |
| Edu: University partial   | 5.3    | 22.3 | 5.2         | 22.2    | 3.4       | 18.2    | 2.6         | 16.0    | 1.9       | 13.6    | 7.8         | 26.9        | 6.1     | 24.0        | 9.1         | 28.9    |
| Edu: University completed | 31.6   | 46.5 | 6.4         | 24.5    | 5.2       | 22.1    | 6.0         | 23.8    | 5.6       | 23.1    | 70.0        | 45.9        | 75.2    | 43.3        | 65.8        | 47.5    |
| Edu: Post-graduate        | 2.4    | 15.3 | 0.0         | 0.0     | 1.0       | 10.1    | 0.3         | 5.1     | 1.4       | 11.8    | 3.3         | 17.9        | 7.3     | 26.1        | 5.0         | 21.7    |
| Job: Agriculture          | 12.3   | 32.8 | 18.2        | 38.7    | 20.3      | 40.3    | 15.7        | 36.5    | 24.4      | 43.1    | 0.8         | 9.1         | 4.5     | 20.7        | 2.1         | 14.3    |
| Job: Casual / Petty       | 16.1   | 36.8 | 19.7        | 39.8    | 22.0      | 41.5    | 21.8        | 41.3    | 20.2      | 40.2    | 8.2         | 27.5        | 12.2    | 32.8        | 7.6         | 26.5    |
| Job: Business             | 29.6   | 45.7 | 45.1        | 49.8    | 36.1      | 48.1    | 45.9        | 49.9    | 35.2      | 47.9    | 16.0        | 36.8        | 6.1     | 24.0        | 12.8        | 33.4    |
| Job: Formal employment    | 6.5    | 24.7 | 9.4         | 29.2    | 4.5       | 20.7    | 7.3         | 26.1    | 5.2       | 22.2    | 7.4         | 26.2        | 4.5     | 20.7        | 5.7         | 23.3    |
| Job: Other                | 2.7    | 16.3 | 2.5         | 15.5    | 3.8       | 19.1    | 2.1         | 14.4    | 3.3       | 17.9    | 3.3         | 17.9        | 3.3     | 17.8        | 1.8         | 13.4    |
| Job: None                 | 32.7   | 46.9 | 5.2         | 22.2    | 13.4      | 34.1    | 7.1         | 25.7    | 11.7      | 32.3    | 64.2        | 48.0        | 69.5    | 46.1        | 70.0        | 45.9    |
| Christian                 | 97.2   | 16.6 | 95.8        | 20.1    | 94.5      | 22.8    | 96.3        | 18.8    | 95.8      | 20.2    | 99.6        | 6.4         | 99.2    | 9.0         | 99.5        | 7.2     |
| Traditional religion      | 1.3    | 11.3 | 2.7         | 16.3    | 2.4       | 15.3    | 1.3         | 11.4    | 1.4       | 11.8    | 0.0         | 0.0         | 0.4     | 6.4         | 0.3         | 5.1     |
| Unspecified religion      | 1.5    | 12.3 | 1.5         | 12.1    | 3.1       | 17.3    | 2.4         | 15.2    | 2.8       | 16.6    | 0.4         | 6.4         | 0.4     | 6.4         | 0.3         | 5.1     |
| Praying times             | 4.9    | 1.2  | 4.8         | 1.3     | 4.8       | 1.5     | 4.9         | 1.2     | 4.9       | 1.3     | 5.1         | 1.0         | 5.0     | 1.0         | 5.0         | 1.0     |

survey instrument is attached.

## 4 Empirical Analysis

Our research project is split into three distinct parts. The first part scrutinizes the effects of the program on economic employment. The second part analyzes the effects of the program on psychological well being. The final part analyzes the program's effects on political activism.

### 4.1 Economic employment

Our main outcome of interest consist of a comprehensive economic employment index. The index includes all survey items that pertain to economic employment (broadly defined). Specifically, the index will include all items in section C, D, E / F,<sup>3</sup> N, and O. We create the index by standardizing all items and averaging across them. In a further step, we will report treatment effects for all sub-indexes. In the supplementary material, we will also analyze all questions separately. Our main hypothesis is therefore as follows:

- The educational program increases economic employment of participants as compared to non-participants.

The coding of the respective survey items is as follows.

- **Section C (Assets).** For question C101, five points are given for answer 1, four points for answer 2, three points for answer 3, two points for answer 4, and one point for answer 5. For question C102, three points are given for answer 1, 2, 3 or 8, two points for answer 4, 5, 6, and 7, and one point for 9. For question 103,

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<sup>3</sup>Section E will only be asked for participants in modality 1, while section F will only be asked for participants in modality 3.



a point is given for each item. For question C104, the points correspond to the answer choices (i.e., one point for 1, etc.).

- **Section D (Income).** For question D103, five points are given for answer option 1, four points for answer option 2, three points for answer option 3, two points for answer option 4, and one point for answer option 5. All sub-questions for this outcome will be coded separately. Questions D101 and D102 are not re-coded.
- **Section E (Entrepreneurship).** All items are only assessed for modality 1 participants. For all binary questions (E101, E104, E111, E113), a point is given for a positive answer and zero points otherwise. Question E102, E115 and E116 will not be part of the index, but may be used for heterogeneous treatment effects analyses. Questions E105 will not be analyzed. All remaining items are continuous and will not be re-coded.
- **Section F (Employment).** All items are only assessed for modality 3 participants. For all binary questions (F101, F102, F104), a point is given for a positive answer and zero otherwise. Questions F105, F106 and F107 will not be part of the index, but used for heterogeneous treatment effects analyses. All remaining items are continuous and will not be re-coded.
- **Section N (Economic Empowerment).** All items in section N will be coded in reverse. I.e., five points will be given for answer 1, four points for answer 2, etc. Question N109 is binary and will be given one point if positive and zero otherwise. Item N110 will not be analyzed.

## 4.2 Psychological well being

Our main outcome of interest consist of a comprehensive psychological well being index. The index includes all survey items that pertain to well being. Specifically, the

index will include all items in section I, J, L, and O. We create the index by standardizing all items and averaging across them. In a further step, we will report treatment effects for all sub-indexes. In the supplementary material, we will also analyze all questions separately. Our main hypothesis is therefore as follows:

- The educational program increases the psychological well being of participants as compared to non-participants.

The coding of the respective survey items is as follows.

- **Section I (Self-Confidence).** All questions will be analyzed and not-recoded.
- **Section J (Self-Efficacy).** All questions will be analyzed and not-recoded.
- **Section L (Relationships).** All questions will be analyzed and not-recoded.
- **Section O (Resilience).** All items in section O will be coded as presented.

### 4.3 Political activism

To judge the degree to which the program affected political activism, we rely on six attitudinal outcomes as our main outcome. We believe these variables best capture the propensity of individuals to engage in costly political demonstrations in an authoritarian regime.<sup>4</sup> These are items M105, M106 (reversely coded), M107 (reversely coded) and the three first outcomes in item M102. We combine these six items to a political activism index by standardizing the variables and averaging across them. Our main hypothesis is thus as follows:

- The program increased political activism among participants as compared to non-participants.

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<sup>4</sup>Note that we were unable to ask more explicit questions given the high likelihood of severe repercussions for participants.

To assess the mechanisms that hypothetically link economic well being to political activism, we assess seven mechanisms. The seven mediators, including their hypothesized direction and measurement, are as follows:

- *Time*: First, we hypothesize increased employment may *decrease* political activism by diminishing participants' free time. We measure free time using an index of the variables contained in section G. These variables will be standardized and averaged across. The variables will be coded as presented (only G101 will be coded in reverse). All variables will be combined to an index.
- *Loss aversion*: Second, we hypothesize that increased employment may *decrease* political activism given that economically empowered individuals may have more to lose from engaging in costly collective action in an authoritarian regime. We measure the level of wealth using the index created from items in section C (see above).
- *Deprivation*: Third, we hypothesize that increased employment may *decrease* political activism given that individuals are less economically desperate. We measure economic desperation using income data generated in section D. The variables will be combined to an index as explained above.
- *Social connectivity*: Forth, we hypothesize that increased employment may *increase* political activism by expanding and strengthening individuals' social networks. We measure social networks using survey item M101.
- *Empowerment*: Fifth, we hypothesize that increased economic activity may *increase* political activism by fostering psychological feelings of empowerment, particularly self-efficacy and self-confidence. We measure both concepts using a comprehensive index of all items contained in section J and I, i.e., by standardizing the variables and averaging across them.

- *Information:* Sixth, we hypothesize that increased economic activity may *increase* political activism by fostering individuals' level of informedness. We measure the level of informedness using all items in section K. Specifically, items K101, K102, K103 will be assigned the indicated points (coded in reverse), while item K104 will be given one point per answer. Again, all items are standardized and averaged across.
- *Risk-Taking.* Finally, we hypothesize that increased economic activity may *increase* political activism by accustoming individuals to take risks. We measure risk-taking using all items from section H. All items are coded as displayed (except H102, which will be coded in reverse), and will be combined to an index, by standardizing single items and averaging across them.

## 4.4 Estimation

In order to estimate the reduced form effect of the program on our three main outcomes of interest, we estimate the following linear equation.

$$Y_{it} = \beta_0 + \beta_1 \cdot Treatment_{it} + \epsilon_{it} \quad (1)$$

where  $Y$  is the respective index for individual  $i$  at point  $t$ . *Treatment* denotes whether individual  $i$  took part in the program. In our baseline model, we control for all pre-treatment covariates listed in section A and collected during the baseline. Specifically, we include individual  $i$ 's age (A101), gender (A102), marital status (A103), education (A104; combined to a index ranging from 1-10, which we standardize), religion (A105; we only use christian or traditional), and religiosity (A106). We estimate the equation using OLS. In so doing, we combine all three modalities. In addition, we will run the following robustness checks by estimating the equation without covariates.

Moreover, we will analyze the data dropping all baseline data, given that it was plagued by attrition in the control group.<sup>5</sup>

We also pre-register the following heterogeneous treatment effects analyses.

- We will use BART trees to search for meaningful heterogeneity
- We will split the sample along the three modalities
- We will split the analyses between men and woman
- For modality 1, we will split the analysis between urban and rural participants
- For modality 1, we we examine outcome differences between participants who received a financing referral and those who did not

## 5 Final remarks

We commit to:

- Make all data and code available after the initial publication of any academic paper or 3 years after the election is finished, whichever comes first.
- Answer any questions pertaining to our analysis or to this document.
- Make any deviations from this PAP explicit in the paper.

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<sup>5</sup>We will analyze whether attrition was MIPO| X, see Gerber and Green 2012.