# The Ethical Research Institute

## ITWORKS' JOB PLACEMENT PROGRAMS:
### AN ASSESSMENT OF DIRECT AND MULTIPLIER IMPACTS

JUNE 2014

This publication is an independent third-party assessment of the impact, both current and projected, of ITWorks' job placement programs and model of operation

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# ITWorks' Projected Future Impact

If scaled across more cities and regions in Israel, ITWorks' programs have the potential to increase employment and demand for goods and services nationally. Specifically, given relatively modest entry-level salaries in Israel (including in Israel's hi-tech industry[1]), scaling ITWorks' programs will likely cause demand for low-cost services and consumer goods (such as food at economical restaurants, affordable clothing, children's education tools, and other consumer goods) to rise and wages and employment in these sectors to increase. This, in turn, will increase demand for other goods and services by the new hires in these secondary sectors, and so forth. This type of local multiplier effect could continue to significantly improve economic welfare in regional economies even if the magnitudes are not large enough to affect the national economy as a whole, as illustrated in Moretti (2010). Furthermore, because the high-tech sector is constantly growing disproportionately to other sectors and presents new job vacancies rather than competing opportunities (Nathanson, 2011), ITWorks is expected to produce an increase in net employment at least until there are no vacancies (out of 7,000) remaining in the information and communication sector. However, several future projection scenarios are considered in order to account for uncertainty of hi-tech industry growth.

## SCENARIO A: STAGNATION IN HI-TECH JOB VACANCIES

In Scenario A, the substantially conservative assumption is made that this figure (of 7,000) will not grow, so that ITWorks would reach full scale upon filling a cumulative sum of up to 7,000 entry-level hi-tech jobs with future program cohorts. Beyond this level, it is conservatively assumed that there would be a risk of crowding out.

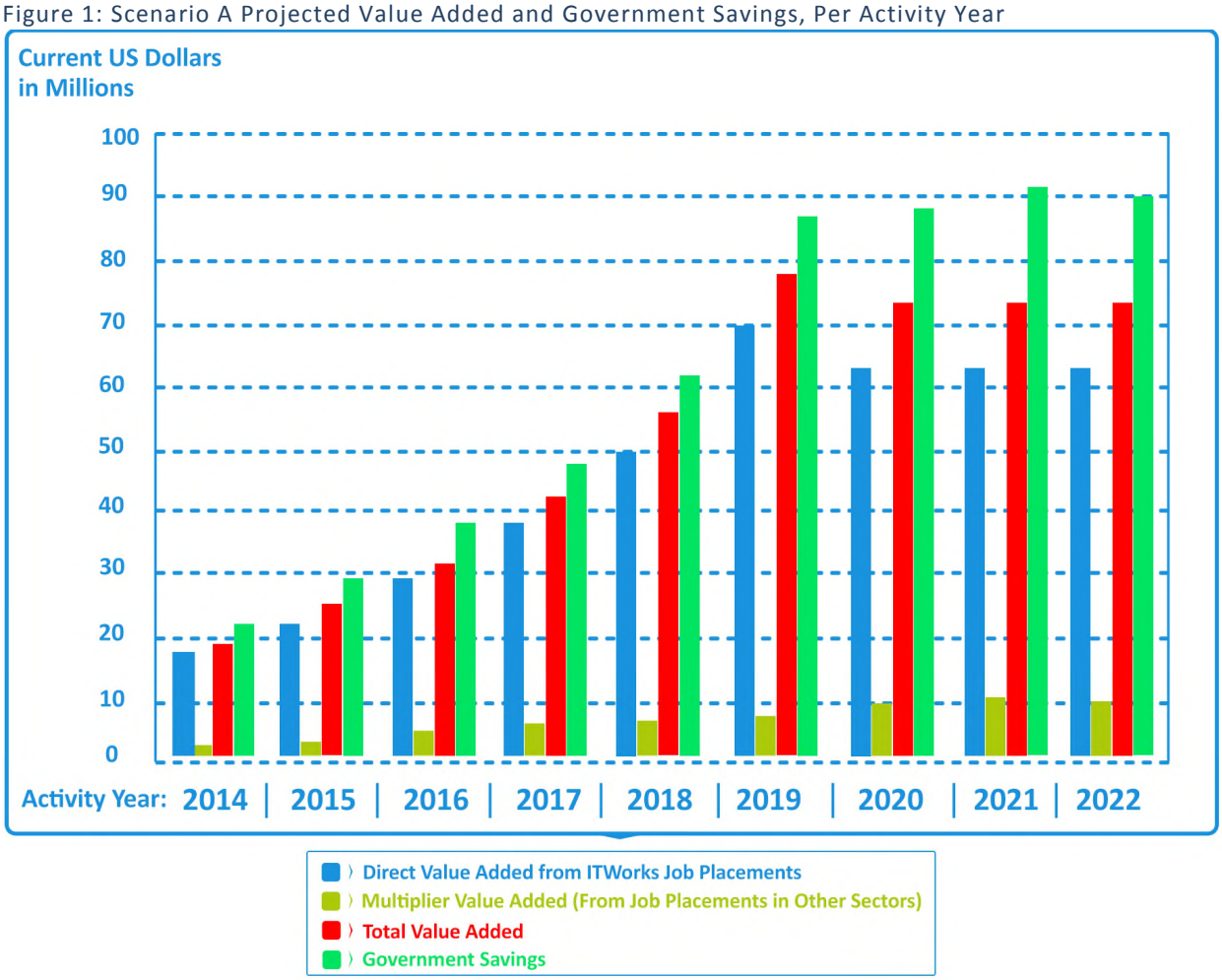
ITWorks provides projections/target numbers of program participants for cohorts 2014 through 2022. We use these figures, but the number of program participants is capped when the sum of those participants projected to find relevant jobs reaches 7,000. This threshold is crossed after the 2019 cohort graduates (that is, after 7,760 people from cohorts 2014 through 2019 participate in ITWorks programs).

Under Scenario A, projected future impact is thus the sum of projected impact for activity years 2014 through 2022 of (i) the existing 2006 through 2013 cohorts, plus (ii) projected 2014 through 2019 cohorts.

Figure 1 presents Scenario A projections of value added directly (through hi-tech wages) and indirectly (through new jobs likely to be created in other sectors, per Moretti (2010)) as well as government savings. Results are presented per activity year (i.e., calendar year of ITWorks operation).

[1] ITWorks uses a conservative assumption of $21,000, taken from 2006, in entry-level hi-tech annual salaries.

Figure 1: Scenario A Projected Value Added and Government Savings, Per Activity Year




Under Scenario A, during the period between activity years 2014 and 2022, existing (2006 through 2013) and future (2014 through 2019) program cohorts are projected to enjoy gross hi-tech wage earnings of more than $834.9 million and a total direct value-added (again defined as gross earnings beyond what their unemployment benefits would be) of approximately $418.9 million. $121.1 million, or 29%, of the projected direct value added is attributable to existing (2006 through 2013) cohorts.

Among other impacts, for every 1,000 ITWorks graduates placed in hi-tech jobs, 335 new jobs are created in the non-tradable, unskilled sector. This equates to almost $200.2 million in additional gross earnings between activity years 2014 and 2022 and a total multiplier value-added (that is, gross earnings less government benefits that would be realized) of almost $60.6 million.

As such, total projected value-added under Scenario A for activity years 2014 through 2022 is approximately $479.5 million. Projected 2014-2019 cohorts have a total return on investment of 1,546%. 2006-2013 cohorts during activity years 2006-2022 (that is, past and future projected years) have a total projected return on investment of 3,261%.

**PROJECT IMPACT UNDER SCENARIO A**

- **Value Added Across Activity Years 2014-2022**:
  - **Direct** Value Added of **$418.9 million**
  - **Multiplier** Value Added of **$60.6 million**
  - **Total** Value Added of **$479.5 million**
- **Return on investment (ROI) of 2014-2019 cohorts: 1,546%**
- **ROI of 2006-2013 cohorts for activity years 2006-2022: 3,461%**
- **Government Savings** on Benefits Spending:
  - **$555.7 million**

As a result of employment realized by individuals previously unemployed, the Israeli government is estimated to have realized $555.7 million saved on social benefits spending.

Again, In virtue of employing the MIM strategy, these effects are not expected to be mitigated by offsetting crowding out impacts**.**

Additional methodological assumptions and caveats are listed in Appendix A.

## SCENARIO B: GROWTH IN HI-TECH JOB VACANCIES

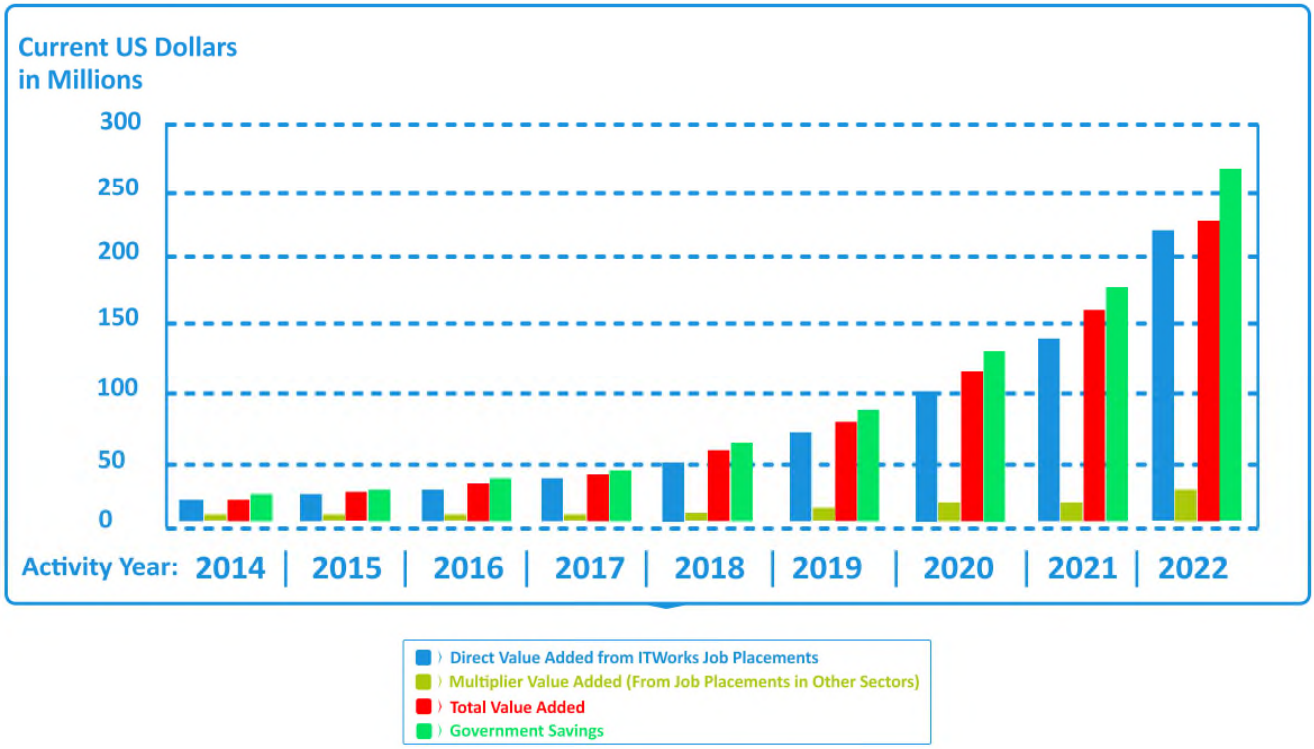
In Scenario B, ITWorks projections/target numbers of program participants for cohorts 2014 through 2022 are used without regard to potential for crowding out beyond a threshold of 7,000 entry-level hi-tech jobs filled.

Under Scenario B, projected future impact is thus the sum of projected impact for activity years 2014 through 2022 of (i) the existing 2006 through 2013 cohorts, plus (ii) projected 2014 through 2022 cohorts.

Figure 2 presents projections of value added directly (through hi-tech wages) and indirectly (through new jobs likely to be created in other sectors, per Moretti (2010)) as well as government savings upon full-scale[2] operation. Results are presented per activity year (i.e., calendar year of ITWorks operation).

[2] The information and communications sector in Israel has about 7,000 vacancies annually (Central Bureau of Statistics, 2014), but this number could grow under this scenario.

Figure 2: Scenario B Projected Value Added and Government Savings, Per Activity Year




Under Scenario B, during the period between activity years 2014 and 2022, existing (2006 through 2013) and future (2014 through 2019) program cohorts are projected to enjoy gross hi-tech wage earnings of more than $1,367.1 million and a total direct value-added (again defined as gross earnings beyond what their unemployment benefits would be) of approximately $685.9 million. $121.1 million, or 18%, of the projected direct value added is attributable to existing (2006 through 2013) cohorts.

Among other impacts, for every 1,000 ITWorks graduates placed in hi-tech jobs, 335 new jobs are created in the non-tradable, unskilled sector. This equates to almost $236.9 million in additional gross earnings between activity years 2014 and 2022 and a total multiplier value-added (that is, gross earnings less government benefits that would be realized) of almost $71.6 million.

As such, total projected value-added under Scenario B for activity years 2014 through 2022 is approximately $757.5 million. Projected 2014-2019 cohorts have a total return on investment of 789%. As in Scenario A, 2006-2013 cohorts during activity years 2006-2022 (that is, past and future projected years) have a total projected return on investment of 3,261%.

**PROJECT IMPACT UNDER SCENARIO B**

- **Value Added Across Activity Years 2014-2022**:
  - **Direct** Value Added of **$685.9 million**
  - **Multiplier** Value Added of **$71.6 million**
  - **Total** Value Added of **$757.5 million**
- **Return on investment (ROI) of 2014-2019 cohorts: 789%**
- **ROI of 2006-2013 cohorts for activity years 2006-2022: 3,461%**
- **Government Savings** on Benefits Spending:
  - **$846.4 million**

As a result of employment realized by individuals previously unemployed, the Israeli government is estimated to have realized $846.4 million saved on social benefits spending.

Additional methodological assumptions and caveats are listed in Appendix A.

### MACROECONOMIC IMPACT

Israel's current poverty rate is approximately 20%, meaning that approximately 1.6 million individuals are classified as poor. Thus, while stimuli in local economies through job placements could lead to detectable reductions in local poverty rates, an increase in job placements would likely have to number at at least several thousand in order to be able to produce any significant national effects. For example, to see a 1% decline in the national poverty rate, 16,000 individuals (or 4,000 households) would need to rise out of poverty. This would require the filling of at least[3] 4,000 jobs to be created as a result of the scaling up of ITWorks' program through the multiplier effect, implying that ITWorks would need (according to Moretti (2010)) to place approximately 11,900 workers in jobs in order for Israel to reduce its national poverty rate by 1%.

## Conclusion

Based on this assessment, we estimate that ITWorks' activities to date have generated a total value added in additional income of $61.9 million, and a total saving in government expenditure on social benefits of $70 million. With a cost per participant of $2,800, this equates to a 983% return on investment.

The projected impact of ITWorks planned activities for cohorts 2014-2019 (assuming conservative scenario A) is projected at $479.5 million in additional income and $555.7 million in government savings on social benefits. This equates to a 1,546% return on investment.

The most significant quantifiable multiplier effects identified are the generation of new jobs in the non-tradable sector and government savings on benefits.

However, we estimate that upon scaling up the projected impact would also include the following multiplier effects at the regional level: decreased poverty rates, decreased inequality rates between demographic groups, reduced crime rates, intergenerational improvements in educational levels, improved individual and family psychological well-being and household debt relief.

[3] This is a lower bound since it is unlikely that all of the newly created jobs will go to an individual whose household lies below the poverty line.

Our review of the scientific literature supports the claim that ITWorks' Multiplier Impacts Model is an effective method to generate net multiplier impact effects that are not counteracted by offsetting factors resulting from crowding-out effects.

Finally, we have identified four main recommendations regarding future ITWorks' activities:

1. If ITWorks' programs are scaled up beyond the number of unfilled hi-tech jobs, we recommend that additional scaling up should be based on identifying additional sectors where there is a significant number of unfilled positions.
2. We recommend the introduction of safeguard monitoring mechanisms to ensure that future job placement activities do not crowd out opportunities for other disadvantaged individuals not participating in ITWorks' programs.
3. We recommend the introduction of additional graduate status monitoring mechanisms, in particular regarding the employment status of participants post-placement, their annual income, and their job category and position.
4. We recommend that future impact assessments should include randomized control trials (RCTs) in order to isolate and thereby best evaluate program versus non-program effects on success metrics.