



Image: Cosmetics produced by a female beneficiary for sale, October 2022

Income-Generating Activities for Cohort 2 of the Refugee Livelihoods Development Impact Bond

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Estimated business metric:

- Cohort 1: 98.5 percent
- Cohort 2: 96.0 percent
- Cumulative for cohorts 1 and 2: 97.0 percent

Summary of findings

About 11 months after disbursement of grants funded by the Refugee Impact Bond, 96.0 percent of the second cohort of grantees were engaged in an active income-generating activity. Most grantees reported positive revenues and profits from their business in the month prior to the survey, modest overall business savings, and little overall business debt. Grantees also reported that their businesses provided a mean monthly income of 92 Jordanian dinars (JOD) (130 USD), with a median of 50 JOD (71 USD), to use for their personal or household expenses. The second cohort of grantees was similar to the first cohort in terms of active income-generating activity, financial metrics, and business practices, but reported lower business savings and anticipated less growth in their future take-home business incomes.

Background

The Near East Foundation's (NEF's) micro-enterprise creation and resilience-building program in Jordan includes training in life and business skills, cash grants to finance micro-enterprises, and additional support for these enterprises. The program, which serves vulnerable Jordanians and refugees, is being funded by a Development Impact Bond (DIB) and implemented through five *Siraj* centers across the country. The DIB-funded program includes three cohorts that began training in April 2022, January 2023, and

April 2024, respectively. Training participants develop a business plan and can apply for the program's grants, which are awarded to successful applicants between 4 and 5 months after their cohort starts training, on average.

In May and June 2024, Mathematica and Mindset conducted a survey of a sample of grantees from the second cohort of the program, about 11 months after grant disbursement. The survey measured a variety of outcomes related to grantees' businesses, as well as their employment status and income from employment. The

remainder of this brief summarizes the findings from this survey in further detail. A comprehensive set of data tables are in Appendix A and technical details about the survey and the analysis are in Appendix B.

Business metric in Cohort 2

To meet the criteria for an active income generating activity (IGA, the DIB’s “business metric”), a respondent needed to provide documentation of or details about a sales transaction, purchase transaction, or preparations for a future sale related to their business within 60 days prior to the survey. Respondents who did not report an active business could also satisfy the conditions through formal employment.¹

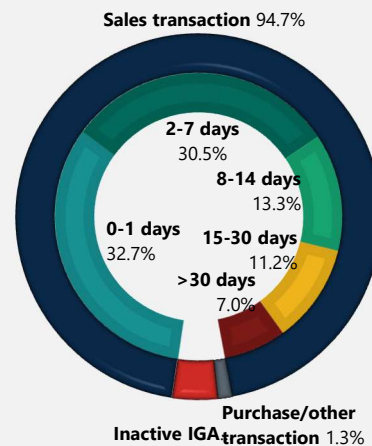
Our findings are based on a representative sample of 626 Cohort 2 grantees.² Survey respondents were 84 percent women, 26 percent refugees, and 25 percent youth; 5 percent had a disability (Table A1a). Respondents’ mean age was 36 years, about one-quarter were heads of their household, and their mean household size was 4 people. NEF had provided them grants averaging 591 JOD (833 USD)³ to support their businesses. About 13 percent of respondents sought to improve an existing business through their grant while the remainder established a new business. The most common types of businesses were home food processing (26 percent), sales of clothes, shoes, and cosmetics (14 percent), and home sewing and tailoring (13 percent).

shoes, and cosmetics (14 percent), and home sewing and tailoring (13 percent).

About 11 months after grant disbursement, 96.0 percent of respondents had an active IGA

(Table A2).^{4,5} Almost all respondents who satisfied the criteria of the business metric did so by providing documentation of a sales transaction within the prior 60 days or conducting one during the survey (Figure 1). About two-thirds of respondents had conducted at least one such

Figure 1. Most grantees reported conducting an eligible sales transaction within the previous week



Note: The outer ring shows the percent of businesses that satisfied the business metric and the ways in which they did so. For respondents who satisfied the business metric with a sales transaction, the inner ring shows the time frame for the most recent sales transaction.

¹ These criteria were initially outlined in the DIB agreements and further defined in the evaluation framework report (Borkum et al. 2022). In Appendix B we provide additional details about the definition of the business metric.

² In addition to the 624 grantees who completed the survey, business metric statistics include two additional grantees who declined to participate in the survey because they reported their business had closed.

³ For clarity of presentation, we do not present conversions from JOD to USD for the remainder of this brief. This exchange rate is pegged, and JOD can be converted to USD by multiplying by 1.41.

⁴The 95-percent confidence interval around this estimate is 95.2 to 96.8 percent, meaning that there is a

95 percent probability that the business metric for the population of grantees is between 95.2 percent and 96.8 percent. The final survey response rate was 86 percent. We do not consider this rate of nonresponse a significant source of bias. Under the conservative assumption that the business metric for non-respondents is half that of respondents, the business metric would still be more than 90 percent overall.

⁵ Although the DIB agreement specifies a 10-month follow-up period, the Cohort 2 IGA survey was conducted with an 11-month follow-up period to avoid capturing unusual business activity during the month of Ramadan 2024. The follow-up period for Cohort 1 was 10 months and it will be 9 months for Cohort 3, resulting in an overall average follow-up period of 10 months.

transaction within the previous 7 days, including 1.0 percent who conducted one during the survey. No additional respondents satisfied the business metric based on the employment-based criteria because the 1.9 percent of respondents who met the criteria for formal employment also had active businesses.

The business metric was similarly high across demographic subgroups and sites. The metric was 94 percent or more for both genders, for refugees and Jordanians, and for youth and adults. However, the business metric was lower in Amman (90 percent) compared to the other four program sites, where it was 97 percent or higher.

Business financial metrics

In addition to questions needed to estimate the business metric, the survey also included questions about financial metrics: monthly revenues and costs—which we used to calculate a rough proxy for monthly profits—and current business savings and debt.⁶ Questions about revenues and costs referenced the calendar month immediately prior to the survey. Although these monthly metrics likely fluctuate from month to month, this provides a useful snapshot of the

status of grantees’ businesses at the time of the survey.

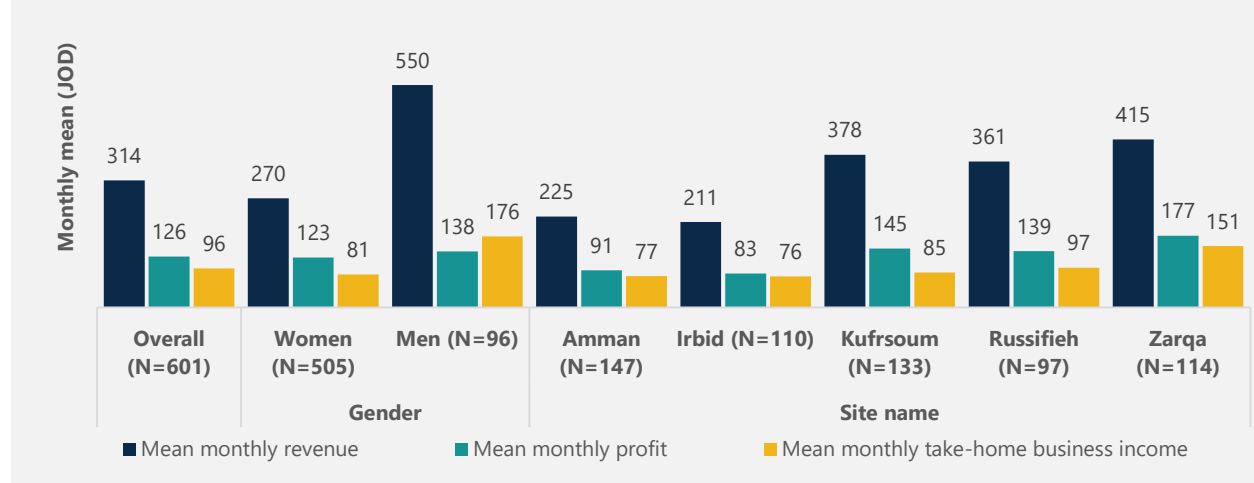
Most respondents with active businesses reported that their businesses generated positive revenues and were profitable during the calendar month preceding the survey.

Across the sample, mean revenues for the full month prior to the survey were 314 JOD and median revenues were 198 JOD (Figure 2, Tables A3a -A3b). Nearly 9 in 10 grantees reported revenues that were higher than their monthly costs, translating into mean estimated monthly profits of 126 JOD and median estimated monthly profits of 100 JOD. Grantees reported modest overall business savings (mean 186 JOD, median 100 JOD), and relatively low overall business debt (mean 84 JOD, median 0 JOD).

Male grantees reported higher levels of revenues and profits than female grantees.

Male grantees reported mean revenues of 550 JOD, which translated into 138 JOD in mean monthly profits after accounting for costs. Female grantees reported mean revenues of 270 JOD, less than half those of male grantees, but had more comparable mean profits of 123 JOD. On average, female grantees reported 62 percent of the

Figure 2. Mean monthly revenues, profits, and take-home business incomes were higher for men than women and higher in Kufrsoum, Russeifa, and Zarqa than Amman and Irbid.



⁶ Revenues and costs were estimated from respondents’ written records, where available (about three-quarters of cases for revenues and two-thirds for costs), or else

self-reported. Business savings and debt were self-reported.

business savings of male grantees but had only 11 percent of males' levels of business debt.

Differences in revenues and costs between men and women appear to be related to differences in business types, the additional resources they have invested in their businesses, and the amount of time they spend each week on their businesses. Whereas almost half of female grantees operated home-based food processing, trade of clothing and cosmetics, or tailoring businesses, the type of businesses operated by male grantees were more variable and included business types that are likely to involve higher-value transactions (for example, mobile maintenance services). Moreover, 75 percent of men but only 48 percent of women reported that they had additional funding for the business besides the grant, largely from their own or other household members' savings (Table A4). This translates into nearly four times the mean outside investment in the business (485 JOD for men versus 131 JOD for women). Finally, men reported spending a mean of 40 hours working on their business during a typical week, whereas women only reported a mean of 23 hours per week, likely because they are balancing working on their businesses with childcare and other household responsibilities.

There were also some substantial differences in business financial metrics across program sites, but only small differences between other subgroups. Grantees in Kufrsoum, Russeifa and Zarqa reported monthly revenues and profits that were up to double those reported by grantees in Amman and Irbid, on average. Jordanians reported higher revenues than refugees (328 JOD versus 276 JOD) but also higher costs, which translated into similar mean profits. Youth and adult grantees reported similar business financial metrics to one another.

Take-home business income

The survey also asked respondents how much business income they used for personal and household expenses during the full month prior to the survey.⁷ We consider this an important measure of whether grantees' IGAs are likely to translate into increased consumption, as anticipated by the program logic and as will be measured as part of the impact evaluation.

The mean take-home business income among active businesses was 96 JOD, and the median was 50 JOD. About 92 percent of respondents with active businesses reported a positive take-home business income in the month prior to the survey. As with revenues and profits, mean take-home incomes were higher for men than women (176 JOD versus 81 JOD), but similar for Jordanians, refugees, youth, and adult beneficiaries. Similar to findings for revenues and profits, grantees in Russeifa, Zarqa and Amman reported take-home business incomes that were up to double those in Irbid and Amman, on average. Overall mean take-home income amounts to about one-third of the Jordanian minimum monthly wage (260 JOD). For refugees, it amounts to about one-quarter of mean monthly household expenditures for out-of-camp refugees, estimated in a 2023 UNHCR survey (321 JOD).⁸

Grantee businesses that generated the highest take-home business income tended to have more outside investment and involve a higher time commitment by the grantee. To explore potential "success factors" we focus on women, who comprise more than 8 in 10 grantees. We examined the characteristics of businesses for women in the top quartile of women's take-home business income (110 JOD per month or more). These women operated a wide variety of business types, although they were more likely to operate salons and less likely to operate grocery or food

⁷ Take-home business income was self-reported and was not linked directly to estimated profits.

⁸ UNHCR collected these data from a representative sample of refugees across Jordan in Q2 2023. <https://data.unhcr.org/en/documents/details/103118>.

trade businesses than their counterparts in lower quartiles. They reported an average of 230 JOD in funding for their businesses in addition to the grant, compared to just 105 JOD for those in other quartiles. Finally, they reported spending about 50 percent more hours per week on their businesses relative to lower quartiles (31 versus 21 hours). However, the characteristics of these grantees' businesses or unobserved characteristics of the grantees themselves might also be contributing the differences in take-home business income.

Grantees anticipated little change in their take-home business incomes over the coming year, on average (Tables A3a-A3b). The survey also asked respondents how much monthly income they hoped to take home from their business one year from the survey, which is one measure of their aspirations for their business. Mean and median anticipated take-home incomes were similar to current levels, both overall and among most subgroups. As with other business financial metrics, there were some differences by site, with respondents in Amman the most positive about future take-home incomes and those in Zarqa the

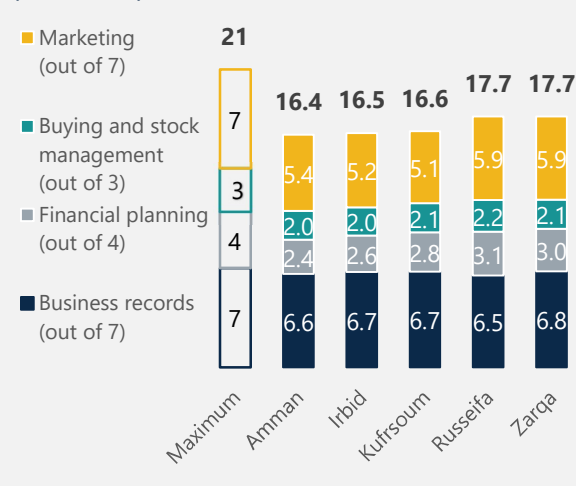
least positive.

Business practices

Drawing on a business practice measurement approach that was developed by researchers at the World Bank and has been implemented in several other low- and middle-income countries, we assessed the extent to which grantees reported implementing business management best practices in four different domains: (a) business records, (b) financial planning, (c) buying and stock management, and (d) marketing. These scores have been found to be positively correlated with business sales and profits.⁹ A summary of the components of the various scores is available in Appendix C.

The overall business practices score was 16.9 out of 21, or 81 percent of the maximum score (Table A5). Respondents scored relatively well on business records practices (a mean of 6.6 out of 7, or 94 percent), which is consistent with the large share of grantees who were able to provide documentation of a recent transaction. The lowest scores were for financial planning practices (mean 2.7 out of 4, or 68 percent), and buying and stock management practices (mean 2.1 out of 3, or 70 percent). The mean marketing practices score was 5.5 out of 7, or 79 percent. Grantees in Zarqa and Russeifa received the highest mean overall scores, driven by higher scores for marketing and financial planning practices (Figure 3).¹⁰

Figure 3. Grantees in Zarqa and Russeifa had the highest business practice scores (out of 21)



Income from employment

The survey also asked all respondents whether they were employed in a wage-paying job, and for those who were, requested additional information about their jobs and employers. These questions were designed to assess whether any respondents without currently active businesses could satisfy the business metric via formal employment, and

⁹ McKenzie, David, and Christopher Woodruff. "Business Practices in Small Firms in Developing Countries." *Management Science*, vol. 63, no. 9, 2016, pp. 2967-2981. <https://doi.org/10.1287/mnsc.2016.2492>.

¹⁰ Zarqa and Russeifa are located near one another and share NEF implementation staff. The pattern of findings might indicate a combination of shared implementation characteristics and similar contexts.

to gain a broader understanding of the economic activities in which grantees are engaged.

About 5 percent of respondents reported being employed in a wage-paying job in addition to operating an active business. These respondents reported working a mean of 35 hours per week and earning mean monthly wages of 287 JOD (not shown). Of the employed respondents, about one-third met additional requirements for formal employment, including social security contributions or labor contracts, working at least 20 hours per week, and earning a monthly wage above the established Jordanian minimum wage. As mentioned earlier, all formally employed respondents also had active businesses. Overall, although some grantees are balancing running a business and employment, most are relying on their businesses as a source of income.

Comparison of Cohorts 1 and 2

Business metric: The business metric was similarly high for Cohorts 1 and 2—above 95 percent for both. It was slightly lower for Cohort 2, by 2.5 percentage points, possibly due to the longer follow-up period (11 versus 10 months) or implementation-related factors related to Cohort 2 being about 50 percent larger than Cohort 1.

Business financial metrics: Cohort 2 grantees had similar mean revenues, costs, profits, business debt, and take-home business income to Cohort 1 (Table A6). However, they had lower mean business savings, by about 100 JOD. Further, whereas Cohort 1 grantees anticipated approximately doubling their take-home business income in the following year, on average, Cohort 2 anticipated that future income would be similar to

current levels. It is unclear what led to these changes in business savings and expectations across cohorts.

Business practices: Business practice scores were similar across the two cohorts, although Cohort 2 showed a small (2.3 percentage point) improvement in business practice scores, which was driven by a modest improvement in the marketing score.

Next steps

We will continue to explore the implementation and results of the program using additional methods and data. The next steps for each evaluation activity are as follows:

- / **Impact evaluation:** Mathematica and Mindset recently completed the impact evaluation survey and will share findings on the consumption metric in early September 2024.
- / **Preliminary evaluation report:** Mathematica will produce the preliminary evaluation report in December 2024. This report will include the findings on the business metric for the first two cohorts (drawing on the respective memos), the impact evaluation (drawing from the consumption metric memo and analysis of other outcomes), and the process evaluation.
- / **Business metric:** Mathematica and Mindset will conduct the IGA survey for Cohort 3 in summer 2025.
- / **Final evaluation report:** Mathematica will produce a revised final report, including IGA findings across all three cohorts by mid-August 2025.

Appendix A. Data tables

Table A1a. Cohort 2 sample characteristics

Characteristic	All Cohort 2 grantees	Cohort 2 IGA survey sample
Demographic and household characteristics at time of selection:		
Women (%)	81.3	83.9
Youth (%)	27.2	25.1
Refugees (%)	26.0	26.0
Mean age (years)	35.0	36.0
Head of household (%)	27.1	25.7
Has a disability (%)	4.0	4.5
Literate (%)	98.0	97.6
Mean household size	4.0	4.0
Sample sizes	1,204	626
Program site (%):		
Amman	23.4	26.2
Irbid	16.9	17.7
Kufrsoum	21.4	21.7
Russeifa	17.4	15.7
Zarqa	20.8	18.7
Sample sizes	1,204	626
Grant characteristics:		
Mean grant amount (JOD, NEF-reported)	590	591
Mean number of months between grant disbursement and survey date	n.a.	11.2
Had a business before training began (% , NEF-reported)	11.8	13.1
Sample sizes	1,204	626
Business type (%):		
Home food processing	26.7	26.1
Trade in clothes and shoes, fabrics, accessories, perfumes, and make-up	16.3	13.8
Home sewing, tailoring and repair of clothes, shoes, and leather	11.0	13.1
Grocery and food trade	12.5	13.0
Men's and women's salons, beauty centers, and gyms	10.5	11.5
Other	23.0	22.4
Sample sizes	1,204	624

Sources: Gender, age, refugee status, program site, grant amount, grant disbursement date, and preexisting business at time of training are from NEF activity data. Head of household status, household size, and literacy are from the NEF's vulnerability assessment. Business type for all grantees is from NEF's activity data; business type for the survey sample was provided by the respondents at the time of the IGA survey. Sample sizes differ across panels because business type is missing for the two grantees who declined to participate in the survey because they reported their businesses had closed.

Notes: n.a. = Not applicable. Youth are defined as being under age 25 at the beginning of the program.

Table A1b. Cohort 2 sample characteristics, by subgroup

Sample	Overall	Men	Women	Jordanians	Refugees	Youth	Adults
Grant characteristics (%):							
Mean grant amount (JOD, NEF-reported)	591	597	590	588	600	595	590
Had a business before training began (%, NEF-reported)	13	10	14	15	9	14	13
Sample sizes	626	101	525	463	163	157	469
Business type (%):							
Home food processing	26	13	29	20	44	21	28
Trade in clothes and shoes, fabrics, accessories, perfumes, and make-up	14	7	15	17	5	13	14
Home sewing, tailoring and repair of clothes, shoes, and leather	13	7	14	13	15	8	15
Grocery and food trade	13	12	13	16	4	11	14
Men's and women's salons, beauty centers, and gyms	12	14	11	12	10	15	10
Hotels, wedding halls, party facilities, musical equipment, studios	4	4	4	4	6	6	4
Breeding and trading of sheep, livestock, fish, birds and bees	3	5	3	3	2	8	1
General maintenance (mobile business)	2	15	0	1	6	4	2
Agriculture, agricultural materials, feed and veterinary medicine	2	3	2	3	1	4	1
Furniture, furnishings, children's toys, home electrical and maintenance work	1	1	1	2	1	2	1
Trade and maintenance of cellular, internet, computer equipment and accessories	1	3	1	1	1	1	1
Libraries, stationery, printing press	1	7	0	1	1	3	0
Restaurant, butchery, poultry and fish, bakery and pastries, sweets and ice cream	1	2	0	1	1	1	0
Other	6	8	6	7	5	4	7
Sample sizes	624	101	523	461	163	157	467

Source: Grant amount and preexisting business at time of training are from NEF activity data. Business type was provided by the respondents at the time of the IGA survey.

Notes: Totals for business type do not always sum to 100 percent because of rounding. Youth are defined as being under age 25 at the beginning of the program. Sample sizes differ across panels because business type is missing for the two grantees who declined to participate in the survey because they reported their businesses had closed.

Table A2. Business metric, by subgroup

Sample	Sample size	Active business: at least one sales transaction in past 60 days (%)	Active business: no sales transaction but at least one purchase transaction in past 60 days (%)	Active business: no sales or purchase transaction but productive activity in past 60 days (%)	No active business but formally employed (%)	Total value of business metric (%)	95-percent confidence interval
Full sample:							
All	626	94.7	0.5	0.8	0.0	96.0	[95.2, 96.8]
By gender:							
Women	525	94.7	0.6	1.0	0.0	96.2	[95.2, 97.1]
Men	101	95.0	0.0	0.0	0.0	95.0	[93.4, 96.7]
By age:							
Youth	157	94.9	0.0	1.3	0.0	96.2	[95.0, 97.4]
Adult	469	94.7	0.6	0.6	0.0	95.9	[94.9, 97.0]
By refugee status:							
Refugees	163	93.3	0.6	0.6	0.0	94.5	[92.6, 96.4]
Jordanians	463	95.2	0.4	0.9	0.0	96.5	[95.6, 97.5]
By program site:							
Amman	164	85.4	1.2	3.0	0.0	89.6	[87.0, 92.2]
Irbid	111	99.1	0.0	0.0	0.0	99.1	[98.1, 100.1]
Kufrsoum	136	97.8	0.0	0.0	0.0	97.8	[96.4, 99.2]
Russeifa	98	99.0	0.0	0.0	0.0	99.0	[97.9, 100.0]
Zarqa	117	96.6	0.9	0.0	0.0	97.4	[95.8, 99.1]

Source: Cohort 2 IGA survey

Notes: Subtotals may not match the total due to rounding. Youth are defined as being under age 25 at the beginning of the program.

Table A3a. Business financial metrics, active businesses only (means)

Sample	Sample size	Number of days since last sale	Monthly revenues (JOD)	Monthly costs (JOD)	Estimated monthly profits (JOD)	Grantees with positive profits (%)	Current monthly take-home income (JOD)	Anticipated monthly take-home income in one year (JOD)	Business savings (JOD)	Business debt (JOD)
Full sample:										
All	601	8	314	189	126	86	96	104	186	84
By gender:										
Women	505	9	270	146	123	87	81	90	170	36
Men	96	6	550	414	138	84	176	177	274	337
By age:										
Adult	450	8	308	180	128	87	95	108	189	78
Youth	151	8	332	214	118	85	99	93	179	103
By refugee status:										
Jordanian	447	8	328	204	124	85	98	103	204	87
Refugees	154	8	276	145	131	92	92	107	134	75
By program site:										
Amman	147	11	225	133	91	90	77	132	155	130
Irbid	110	10	211	128	83	80	76	77	158	80
Kufrsoum	133	7	378	232	145	89	85	89	176	76
Russeifa	97	8	361	226	139	86	97	94	229	35
Zarqa	114	6	415	239	177	85	151	119	229	79

Source: Cohort 2 IGA survey

Note: Sample sizes vary slightly across outcomes. The sample sizes reported here are the number of grantees who reported any of the outcomes in the table. The incidence of missing values was low (1 percent or less).

Table A3b. Business financial metrics, active businesses only (medians)

Sample	Sample size	Number of days since last sale	Monthly revenues (JOD)	Monthly costs (JOD)	Estimated monthly profits (JOD)	Current monthly take-home income (JOD)	Anticipated monthly take-home income in one year (JOD)	Business savings (JOD)	Business debt (JOD)
Full sample:									
All	601	3	198	95	100	50	50	100	0
By gender:									
Women	505	3	177	80	94	50	50	100	0
Men	96	2	385	150	163	120	150	142	0
By age:									
Youth	151	3	200	95	100	50	50	100	0
Adult	450	3	185	94	96	50	50	100	0
By refugee status:									
Refugees	154	3	187	91	100	70	70	70	0
Jordanians	447	3	200	95	100	50	50	100	0
By program site:									
Amman	147	4	152	50	72	40	50	80	0
Irbid	110	3	150	76	78	50	50	74	0
Kufrsoum	133	2	230	104	104	50	50	140	0
Russeifa	97	3	212	119	96	50	50	150	0
Zarqa	114	2	298	113	138	100	78	135	0

Source: Cohort 2 IGA survey

Note: Sample sizes vary slightly across outcomes. The sample sizes reported here are the number of grantees who reported any of the outcomes in the table. The incidence of missing values was low (1 percent or less).

Table A4. Business resources, active businesses only

Sample	Sample size	Hours spent on business in typical week	Respondent had external funding for business (%)	Mean external funding for business (JOD)
Full sample:				
All	601	25.8	52.4	188
By gender:				
Women	505	23.1	48.1	131
Men	96	40.1	75.0	485
By age				
Youth	151	27.6	55.6	184
Adult	450	25.2	51.3	188
By refugee status:				
Refugees	154	22.9	53.9	129
Jordanians	447	26.8	51.9	208
By program site:				
Amman	147	19.6	43.5	239
Irbid	110	27.7	58.2	156
Kufrsoum	133	25.9	57.9	166
Russeifa	97	30.5	46.4	123
Zarqa	114	27.9	57.0	230

Source: Cohort 2 IGA survey

Note: Sample sizes vary slightly across outcomes. The sample sizes reported here are the number of grantees who reported any of the outcomes in the table. Youth are defined as being under age 25 at the beginning of the program.

Table A5. Business practice scores, active businesses only

Sample	Sample size	Business records (0-7 points)	Financial planning (0-4 points)	Buying and stock management (0-3 points)	Marketing (0-7 points)	Total (0-21 points)	Total (%)
Full sample:							
All	601	6.6	2.7	2.1	5.5	16.9	80.5
By gender:							
Women	505	6.7	2.7	2.1	5.5	17.0	80.8
Men	96	6.5	2.8	2.0	5.4	16.6	79.1
By age:							
Youth	151	6.7	2.6	2.0	5.3	16.6	79.0
Adult	450	6.6	2.8	2.1	5.5	17.0	81.1
By refugee status:							
Refugees	154	6.6	2.7	2.1	5.5	16.9	80.5
Jordanians	447	6.6	2.8	2.1	5.4	16.9	80.6
By program site:							
Amman	147	6.6	2.4	2.0	5.4	16.4	78.0
Irbid	110	6.7	2.6	2.0	5.2	16.5	78.6
Kufrsoum	133	6.7	2.8	2.1	5.1	16.6	79.2
Russeifa	97	6.5	3.1	2.2	5.9	17.7	84.2
Zarqa	114	6.8	3.0	2.1	5.9	17.7	84.1

Source: Cohort 2 IGA survey

Note: Scales adapted from McKenzie and Woodruff (2021). Appendix C provides additional details on the practices included in each subscale. Youth are defined as being under age 25 at the beginning of the program.

Table A6. Comparison of results by cohort

Sample	Cohort 1	Cohort 2	Difference
DIB business metric			
Overall business metric	98.5	96.0	-2.5 **
Active business: at least one sales transaction in past 60 days (%)	97.2	94.7	-2.5 *
Active business: no sales transaction but at least one purchase transaction in past 60 days (%)	1.2	0.5	-0.7
Active business: no sales or purchase transaction but productive activity in past 60 days (%)	0.2	0.8	0.6
No active business but formally employed (%)	0.0	0.0	0.0
Sample size:	603	626	
Business financial metrics (active businesses only)			
Number of days since last sale	9.0	8.2	-0.8
Monthly revenue (JOD)	356	314	-41
Monthly costs (JOD)	225	189	-36
Estimated monthly profits (JOD)	130	126	-4
Current monthly take-home income (JOD)	89	96	7
Anticipated monthly take-home income in one year (JOD)	164	104	-60 **
Business savings (JOD)	290	186	-104 **
Business debt (JOD)	92	84	-8
Sample size:	594	601	
Business practice scores (active businesses only)			
Business records (0-7)	6.5	6.6	0.1 *
Financial planning (0-4)	2.7	2.7	0.1
Buying and stock management (0-3)	2.1	2.1	0.0
Marketing (0-7)	5.2	5.5	0.3 **
Total (0-21)	16.4	16.9	0.5 **
Total (%)	78.3	80.5	2.3 **
Sample size:	594	601	

Source: Cohort 2 IGA survey

Note: Statistical significance estimates are based on regression analysis controlling for beneficiary demographic characteristics and incorporating a finite population correction (see Appendix B for more information).

* p<.05; ** p<0.01

Appendix B. Technical details for the Cohort 2 IGA survey

Sampling

Before sampling, we divided Cohort 2 cohort grantees into strata that were defined by mutually exclusive combinations of program site (five different locations), gender (men and women), age group (youth and adults), and refugee status (Jordanians and refugees). We then selected a random sample of 600 grantees, distributed across strata in proportion to strata's share of the population of grantees. We designated these 600 grantees as the primary sample and the remaining grantees as potential replacements.

When respondents from the primary sample were unreachable, unwilling to participate, or unavailable, we selected replacements from a randomly sorted list of potential replacements from the same stratum. If replacements from that stratum were exhausted, we drew replacements from the most similar stratum with replacements remaining. Drawing on these replacements, we ultimately achieved a sample size of 624 respondents as additional follow-up attempts in the final days of data collection with initial non-respondents proved successful. The business metric also includes two additional grantees who declined to participate in the survey because they reported their business had closed.

Data collection approach

The data collection team participated in a three-day in-person training on the survey. The training included training on protection of human subjects and vulnerable populations, a detailed review of the survey questions, and practice conducting interviews using a series of respondent scenarios.

Data collection occurred between May 8, 2024, and June 13, 2023, a mean of 11.2 months following grant distribution. The minimum follow-up period was 10.8 months, and the maximum

was 12.1 months. Eleven different enumerators conducted the survey in teams of two or three, each with the support of a logistical coordinator who coordinated with potential respondents while in the field. The study used a verbal informed consent statement and procedure approved by the King Hussein Cancer Center Institutional Review Board (IRB) in Jordan and Health Media Lab IRB in the United States.

The final response rate was 86 percent, and the final analysis sample consists of 626 unique grantees. Surveys lasted a mean of 14 minutes.

Definition of business metric

The business metric considers the survey respondent to have an active IGA if they reported that their business is active and met at least one of the following criteria:

1. The data collection team observed a sales or purchase transaction during the survey.
2. The respondent provided transaction records for a sale to a customer (sales transaction) or purchase of inputs (purchase transaction) that was dated within 60 days prior to the survey.
3. The respondent reported a sales transaction within the last 60 days, and provided key details on the transaction, including the service provided or item sold, the amount and payment method, and the demographic characteristics of and their preexisting relationship with the customer.¹¹
4. The respondent reported a purchase transaction within the last 60 days, and provided key details on the transaction, including the amount of the purchase and mode of payment, the good or service purchased, and their preexisting relationship with the good or service provider.

¹¹ We did not seek to verify these details for this or other active IGA criteria; rather, we view the respondent

being able to provide these details as making it more plausible that they were reporting a valid activity.

5. The respondent provides evidence of engaging in production-related activities in the last 60 days. This could be accomplished by showing the enumerator a sample of a product produced within 60 days, describing an upcoming event where goods will be sold, or reporting a down payment and the total expected payment for an ongoing order.
6. Respondents did not have an active business but were formally employed as of the survey date. Formal employment required the respondent to: (a) hold an employment contract or contributing to the social security system; (b) work at least 20 hours weekly; (c) earn at least the Jordanian minimum wage; and (d) describe details about their job, such as the job location, mode of commuting, and job schedule.

We considered respondents who reported that their business was inactive (6 grantees) or who reported having a business but did not unambiguously meet at least one of the above criteria (19 grantees) not to have an active IGA.

Analysis approach

The business metric is a count of the number of grantees with active IGAs divided by the sample size. For calculations of the confidence intervals around the business metric, the analysis takes into account the proportion of grantees in each sampling stratum who responded to the survey by incorporating a finite population correction (FPC). The FPC narrows the confidence intervals as the proportion of grantees included in the survey sample approaches 100 percent. Other statistics provided in the memorandum were calculated using simple descriptive methods.

The aggregate business metric across Cohorts 1 and 2 incorporates cohort-specific FPCs and cohort-level weights that account for the size of each cohort relative to the total cumulative population of grantees. Thus, the estimated business metric is representative of the full population of grantees to date.

Data collection challenges

We encountered only minimal challenges during data collection, mainly with reaching some potential respondents using phone contact information provided by NEF. We mitigated this challenge by working with NEF to contact grantees and encourage their participation. Further, it was not always possible to replace non-respondents with other grantees in the same stratum because some strata were small. Nevertheless, the final response rate was relatively high, we exceeded our targeted sample size, and the final sample is representative of the full group of grantees in key characteristics.

Appendix C. Business practice scores

Below we describe the calculation of each of the four separate business practice scores, which we summed to generate the total business practices score. We also provide Cronbach's alpha for each score, which is a measure of scale reliability across different items, ranging from 0 to 1. An alpha of 1 corresponds to perfect alignment across items (for example, on a two-item scale, one item always equals 1 when another equals 0, and vice versa). The alpha for the total score is 0.52.

Business records

The business records score adds one point for each of the following, if the respondent:

1. Keeps written business records;
2. Records every sale and purchase made by the business;
3. Can use business records to see how much cash the business has on hand;
4. Uses their records regularly to know whether sales of a particular good are increasing or decreasing;
5. Has worked out the cost to the business of the most common good or service they sell;
6. Knows which good or service they make the most profit per unit from selling; and
7. Has a written monthly budget for the business.

Maximum score: 7 / Cronbach's alpha: 0.44

Marketing

The marketing score adds one point for each of the following that the respondent reports doing.

In the last three months:

1. Visited at least one of their competitors' businesses to see what prices they are charging;
2. Visited at least one of their competitors' businesses to see what goods or services they are offering;

3. Asked their existing customers whether there are any other goods or services they would like the respondent to sell;
 4. Talked with a former customer to find out why they have stopped buying from their business;
 5. Asked a supplier about which products are selling well in their industry;
 6. Used a special offer to attract customers; and
- In the last six months:
7. Did any form of advertising.

Maximum score: 7 / Cronbach's Alpha: 0.61

Buying and stock management

The buying and stock management score adds one point for each of the following, if the respondent:

1. Attempted to negotiate with a supplier for a lower price for goods or raw material within the last three months;
2. Compared prices or quality from alternate suppliers against current suppliers within the last three months; and
3. Runs out of supplies or raw materials for their business less than once a month.

Maximum score: 3 / Cronbach's Alpha: 0.31

Financial planning

The financial planning score adds one point for each of the following, if the respondent:

1. Reviews the financial performance of their business and analyzes where there are areas for improvement at least once per month;
2. Has a specific, quantitative target for sales over the next year;
3. Compares actual to targeted sales at least once per month; and
4. Has a written budget of the likely costs their business will have to face over the next year.

Maximum score: 4 / Cronbach's Alpha: 0.44