IMPACT Study Country Report:
Sudan

IMPACT – Impact evaluation of the EU-IOM Joint Initiative for Migrant Protection and Reintegration in the Horn of Africa Region

Disclaimer

This document provides a technical overview and analysis of the data gathered in Sudan, in the context of the IMPACT study. **Its contents were not edited by IOM**.

ABOUT THE EU-IOM JOINT INITIATIVE FOR MIGRANT PROTECTION AND REINTEGRATION
The EU-IOM Joint Initiative for Migrant Protection and Reintegration was launched in December 2016 and is funded by the European Union (EU) Emergency Trust Fund for Africa. The programme brings together 26 African countries of the Sahel and Lake Chad, the Horn of Africa, and North Africa regions, along with the EU and IOM around the goal of ensuring that migration is safer, more informed and better governed for both migrants and their communities. In the Horn of Africa, the programme is implemented primarily in Djibouti, Ethiopia, Somalia and Sudan. The programme enables migrants who decide to return to their countries of origin to do so in a safe and dignified way. It provides assistance to returning migrants to help them restart their lives in their countries of origin through an integrated approach to reintegration that supports both migrants and their communities, has the potential to complement local development, and mitigates some of the drivers of irregular migration. Also within the programme's areas of action is building the capacity of governments and other partners; migration data collection and analysis to support fact-based programming; as well as information and awareness raising.

ABOUT THE IMPACT STUDY
The IMPACT Study is the impact evaluation of the EU-IOM Joint Initiative programme in the Horn of Africa. Launched in March 2020 and concluded in March 2023, the study focuses on Ethiopia, Somalia and Sudan: the three countries in the region where the programme has the largest reintegration caseload. All the IMPACT Study reports, as well as additional resources such as technical annexes, datasets, data analysis scripts and dissemination material are accessible from the IMPACT Study webpage: https://eastandhornofafrica.iom.int/impact-study.

Acknowledgements

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Acronyms and abbreviations

AVRR	Assisted voluntary return and reintegration
CBRP	Community-based reintegration projects
CRA	Complimentary reintegration assistance
DID	Difference-in-difference
EU	The European Union
FGD	Focus group discussion
GRA	General reintegration assistance
HoA	Horn of Africa
IASC	Inter-Agency Standing Committee
IOM	International Organization for Migration
JI	The EU-IOM Joint Initiative
JI-HoA	The EU-IOM Joint Initiative in the Horn of Africa region
KII	Key informant interview
MIMIC	Multiple Indicator Multiple Cause
MIMOSA	Migrant Management and Operational System Application
MoMo	Mobile money
NM	Non-migrant
PA	Principal applicant
PSS	Psychosocial
RSI	Reintegration Sustainability Index
RSS	Reintegration Sustainability Survey
SIYB	Start and Improve Your Business training
TOR	Terms of Reference

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Glossary

RSI	Reintegration Sustainability Index – the IOM institutional RSI index for measuring reintegration using reintegration drivers and their associated dimension and overall weights, informed by a combination of principal components analysis, reviewed and modified by expert consensus. This provides easy interpretation of values, standardised procedures and data, and comparability over time and locations.
RSI MIMIC	Multiple Indicator Multiple Cause (MIMIC) models generating a latent (unknown) reintegration sustainability index not reliant on defined weights (RSI MIMIC). It is a special class of model that allows multiple outcomes to be modelled simultaneously.
Non-migrant identity	A propensity (percentage degree of similarity) that returnees have a similar profile to paired non-migrants (paired on sex, age, educational attainment, length of residence in community, no plans to migrate currently).
Integration perception	Self-perceptions of own level of reintegration (if a returnee returning to pre-migration community), integration (if returnee returning to a new community or non-migrant).
RSS **RSS+** **RSS endline-retro-baseline**	Reintegration Sustainability Survey (RSS) – the survey that collects the indicators to generate the Reintegration Sustainability Index (RSI) – see above. RSS+ was an initial expansion of the standard RSS survey for the purposes of this evaluation/methodology research with additional questions. This instrument was further developed into the RSS endline-retro-baseline by including retro-baseline questions for all RSI indicators and some of the additional indicators added in RSS+.
ReDSS-IASC	A combination of two reintegration measurement frameworks; the Inter-Agency Standing Committee (IASC) Framework was established in 2010 as a starting point for establishing the durable solutions definition as well as criteria "to determine the extent to which a durable solution has been achieved". The Regional Durable Solutions Secretariat (ReDSS), a member of the Technical Steering Committee supporting the operationalisation of the IASC Framework, then developed the ReDSS Solutions framework for displacement affected communities. See Annex 1 for more details.
Baseline	First round of data collection from the migrant returnees, carried out a few weeks after they return to their country of origin.
Endline	Final round of data collection, carried out in real-time, that is, asking questions about the respondent's current situation.
Endline-retro-baseline	A combined baseline and endline, conducted at the same time. Endline questions are asked as normal, about the respondent's current situation. Baseline questions are asked retrospectively, with respondents (both returnees and matched non-migrants) asked to recall their situation two months after the returnee arrived in their country of origin.

Treated returnee	Treated returnees are those that received microbusiness.
Matched non-migrant	A non-migrant who has successfully been matched to a migrant returnee, based on the matching criteria (living in same community, age, gender, education, length of time in community, no plans to move). Matched non-migrants are similarly coded as Treated through inheriting this property from the matched returnee.
Untreated returnee	Untreated returnees are those that were processed by IOM after returned, but while qualifying for reintegration assistance, had not received it by the time the endline-retro-baseline was enumerated. Matched non-migrants are similarly coded as untreated through inheriting this property from the matched returnee. Current Sudan Joint Initiative Programme guidelines indicate that all returnees qualify for reintegration support.
Snowball sample	A snowballing sample was the primary process used to identify non-migrants. Returnees were contacted and solicited to participate, for which they received an incentive if it resulted in the successful non-migrant RSS enumeration. They were given time to identify non-migrants of similar age, education attainment and same-sex as well as migrants that had been resident in the community for at least as long as the returnee had been present.
Modality of microbusiness assistance	Refers to the method through which IOM provided microbusiness assistance to returnees, which includes: • Regular in-kind – IOM would procure business materials and supply them directly to returnees. Also referred to as 'old modality' in parts of the analysis. • Mobile Money (MoMo) in-kind – returnees obtain quotes for material from merchants who, in turn, receive payment via mobile money. • Mobile Money (MoMo) Cash – returnees receive microbusiness assistance in the form of a cash amount transferred directly to them via mobile money. In the context of the JI-HoA programme, the 'Regular in-kind' modality was the only one available at the beginning of operations. In Sudan, 'Mobile Money (MoMo) in-kind' was introduced in September 2019 and 'Mobile Money (MoMo) cash' in March 2020. Both 'Regular in-kind' and 'Mobile Money (MoMo) in-kind' were discontinued after May 2019 and September 2020 respectively.
Reception assistance	Reception assistance is provided to all returnees upon arrival and includes meet and greet at the point of entry, temporary shelter, onward transportation to reach the final destination within the country of origin, pocket money, immediate medical and psychosocial assistance and other services.
General reintegration assistance (GRA)	Different from reception assistance, GRA is not specifically tailored to the needs of returnees, in the sense that all JI-HoA beneficiaries are eligible to receive the reintegration services falling in this category, irrespective of

	their level of vulnerability or specific needs. Examples of GRA services include the enrolment in national health insurance schemes and the participation in business training (as they often cover also psychosocial aspects of reintegration). For practical reasons, although they are distinct types of assistance, reception assistance and GRA are considered jointly in the context of the IMPACT study.
Complementary reintegration assistance (CRA)	CRA is tailored to the needs of the returnee and constitutes the principal form of support provided by the programme to individual beneficiaries. The tailoring is achieved through a process of reintegration counselling, during which a case worker and the returnee define a reintegration plan. In the context of the JI-HoA programme, most reintegration plans focus on the establishment of a microbusiness chosen by the returnee for which IOM provides materials (in-kind) or cash to acquire them. In fewer cases, the reintegration plan focuses on assistance to further the returnee's education.

1   Introduction to IMPACT

In March 2020, Itad was commissioned by the International Organization for Migration (IOM) to undertake an evaluation (hereafter referred to as 'IMPACT') of the EU-IOM Joint Initiative for Migrant Protection and Reintegration in the Horn of Africa (hereafter referred to as 'JI-HoA')). The JI-HoA is a flagship programme for IOM that supports African migrants who find themselves stranded and choose to return to their countries of origin in a safe and dignified way. Upon their return, the EU-IOM Joint Initiative provides the migrants with Economic, Social and Psychosocial assistance to support them during the long and non-linear process of reintegration. The IMPACT study focuses on Ethiopia, Sudan and Somalia – the three countries with the largest reintegration caseload in the programme, and comprises three components: (1) an impact evaluation, (2) a Natural Experiment, and (3) qualitative research.

The first component, which assesses the reintegration of returnees, is the main source of evidence behind this report. A quasi-experimental design was used to compare an index of reintegration at two points in time: (1) a baseline, shortly after migrant returnees came back to their country of origin; (2) an endline at least nine months later. A comparison was also made between the returnees who received IOM support for their reintegration, and a calibration group of non-migrants.

1.1   Purpose, scope, and objectives of IMPACT

Purpose: The main purpose of IMPACT is to provide a robust assessment of the impact of the JI-HoA programme, providing an accountability mechanism to beneficiaries of the programme, the donor, and wider sector,[1] as well as an evidence base to inform future reintegration programming. As a flagship evaluation for IOM, this work is also intended to generate substantial learning on evaluating sustainable reintegration programmes and informing future methodological standards. The IMPACT process will also inform IOM's understanding of sustainable reintegration metrics through testing of the relatively new, Reintegration Sustainability Survey (RSS), including the strengths and weakness of this tool and recommendations on improvements.

Scope: This assignment required the IMPACT team to navigate a number of central challenges which have affected the scope of the work. First, as outlined by IOM in the Terms of Reference,[2] no precedent exists for undertaking an impact evaluation study of the size and complexity of this reintegration programme. Second, there is no consensus on the most appropriate frameworks and metrics to measure 'sustainable reintegration'. Third, IMPACT was commissioned two years into programme implementation and, as such, data availability and quality has been a limiting factor – something that has been exacerbated by the COVID-19 pandemic and associated restrictions. This has had a significant effect on returnee movements as well as the ability to carry out planned data collection activities. And lastly, the scope was influenced by emergent specifics of what is technically, and practically, possible based on an ongoing dialogue between IOM and the IMPACT study team throughout the evaluation period.

To respond effectively to these challenges, the IMPACT study team used a mix of methodologies, including different approaches to modelling and analysing the RSS datasets, as well as a complementary natural experiment and qualitative research that made use of different framings and methods. This enabled the team to mitigate some of the challenges associated with the pioneering nature of this evaluation, the lack of consensus around measuring reintegration, and various challenges that affected the feasibility of data collection.

Objectives: Three objectives were outlined for the IMPACT project:

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[1] EU-IOM (2019). Terms of Reference in Request for Proposals, Services for Conduction of a Study to Evaluate the Impact of the Reintegration Assistance Provided under the EU-IOM Joint Initiative in the HoA Region, p. 28.
[2] EU-IOM (2019). Terms of Reference in Request for Proposals, Services for Conduction of a Study to Evaluate the Impact of the Reintegration Assistance Provided under the EU-IOM Joint Initiative in the HoA Region, p. 2.

Objective 1	Evaluation of the impact of reintegration assistance provided by the EU-IOM Joint Initiative (HoA) on the sustainable reintegration of supported migrant returnees
Objective 2	Improve IOM's understanding of sustainable reintegration metrics
Objective 3	Design a robust methodology that can become a standard for future impact evaluations of reintegration-focused programmes

IMPACT and IOM understand these three objectives to be interacting.

1.2 Evaluation questions

The three objectives were translated into three high-level evaluation questions, and in order to answer these questions effectively, several more detailed sub-questions (Table 1). Sub-questions may support the achievement of more than one objective but have been noted under their primary objective for simplicity. Additional questions and objectives have risen throughout the implementation of the evaluation, many of which have been tackled through other IMPACT reports.

Table 1 High-level evaluation questions and proposed sub-questions for each IMPACT objective

	Objective 1	Objective 2	Objective 3
High-level evaluation question	What is the impact of the EU-IOM Joint Initiative (HoA) on sustainable reintegration of supported migrant returnees?	How can sustainable reintegration metrics be improved?	How can we effectively evaluate impact of reintegration programmes in the future and what are the methodological requirements to do so?
Sub-questions	Have changes in programme implementation, such as the transition to mobile money, affected outcomes of reintegration assistance and, if so, how? How has delay in providing assistance to returnees affected/impacted on their reintegration? How have the EU-IOM Joint Initiative (HoA) adapted the assistance provided to meet changes in context and what has the impact of these changes been on the reintegration of returnees?	Does the current Assisted Voluntary Return and Reintegration (AVRR) data chain collect sufficient information to assess 'sustainable reintegration'? Does the RSI appropriately capture local context, and provide the empirical basis for actionable insights? For example, including opportunities for analysis of drivers of reintegration and remigration and test which of these can be affected by AVRR programme implementation?	As definitions of reintegration often reference the non-migrant residents as a comparison, how can this cohort be meaningfully included in the data chain and contribute to an understanding of sustainable reintegration? Is there evidence to support the W model theory, and what are the implications for evaluative methodologies assessing the effects of reintegration assistance?

2   Description of data

This section describes the data sources used during the evaluation and briefly summarises the background characteristics of the key population. It therefore provides useful context for the in-depth analysis that follows.

The majority of the analysis in this section is based on IOM Programme data. That is, data collected from returnees by IOM as part of the JI-HoA programme itself. This data is routinely updated by IOM to record which types of assistance have been received by whom and when. The analysis presented here is based on data on returnees who returned to their home country up to September 2022.

The other key data source is the Reintegration Sustainability Survey (RSS). The RSS draws together 30 core indicators across three dimensions of reintegration (Economic, Social and Psychosocial) to produce an index of sustainable reintegration for each dimension, as well as an overall index. The RSS instrument thereby provides an understanding of outcome-level change in sustainable reintegration, and other critical data for our analysis. The analysis is based on all RSS surveys conducted within the IMPACT period, unless stated otherwise.

2.1   Returnee demographic characteristics

Table 2 presents the number of returnees included in the programme data for each of the three JI countries, as well as the numbers who were included in our RSS sampling frame, and who completed an RSS survey. It shows that Ethiopia had by far the largest number of returnees, but that returnees in Somalia and Sudan were more likely to be included in the sample frame after screening using the inclusion criteria below and complete an RSS survey.

The criteria for inclusion in the RSS sample frame is as follows:

- Aged 18 or older on arrival back in Sudan

- Must be the principal applicant as opposed to family members of the principal applicant[3]

- Not arrived before 1 July 2018

- Not arrived after 1 July 2021

- Not still in transit (baseline RSS enumeration only)

- IOM unique individual number (MIMOSA) not missing

- Received microbusiness assistance

Table 2 Returnee numbers, as of May 2022

Country	Total number of returnees (universe)	Returnees included in RSS sample frame	Returnees who have completed *any* RSS[4]
Ethiopia	9,945	3,078	1,008
Somalia	1,025	490	225
Sudan	5,871	1,837	685

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[3] Including non-principal applicants in an unstructured way could mean that certain households are enumerated multiple times with other households only enumerated once. It was also assumed that the principal applicant was most likely to be the major earner within the household and hence the most important individual to enumerate.

[4] Including baseline only, endline only, and endline-retro-baseline. Where returnees have completed more than one of these surveys they are only counted once here.

For the following analysis, the Universe of migrants available from the country programme data was used without applying the sample eligibility criteria. The destination countries of the migrants included in the JI programme are displayed in Figure 1. The routes taken are grouped into four categories: Northern (European), Northern (African), Eastern, and Southern.[5]

The Northern (European) category includes migrants who successfully made the journey to Europe. Returnees on the Northern (African) route were often attempting to make the migration to Europe, but only reached parts of Northern Africa. For others in this route, countries such as Egypt and Libya were the intended destinations and some returnees spent several years there. The Eastern route migrants (typically those trying to reach the Gulf, though Somalia and Djibouti) are included as part of this flow. Finally, the Southern route includes countries in Eastern and Southern Africa.

Figure 2 displays a breakdown of the attempted migration routes for Sudanese returnees. In Sudan almost all returnees followed the Northern Africa route (99.7%).
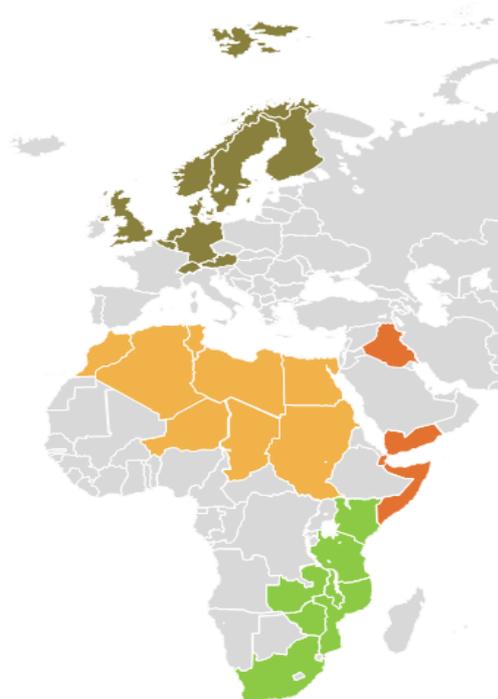
Orange – Eastern, Yellow – Northern (Africa), Green – Southern, Brown – Northern (Europe)

Figure 1 Destination countries and routes taken by migrants in the JI programme

Among the 786 Sudan returnees to whom the question was asked, 90% were recorded as having returned to the community which they lived in before their migration, with the remaining 10% choosing to move back to a new community. Of returnees in Sudan, 23.8% reported that their decision to return was caused, at least in part, by some form of distress in their host country. The most common reasons given for returning to Sudan were that they preferred the origin to their destination (227 returnees), that they had been detained abroad (121 returnees), and that it had become impossible for them to proceed further with their migration efforts (113 returnees). In the 16 qualitative interviews conducted with returnees, all of the respondents were initially seeking to migrate to European countries.

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[5] In all analysis the routes are defined as follows:
Eastern: Iraq, Yemen, Djibouti, Somalia
Northern (Europe): Austria, Germany, Belgium, Denmark, Netherlands, Norway, Finland, Sweden, Switzerland, UK
Northern (Africa): Algeria, Libya, Chad, Morocco, Niger, Egypt, Tunisia, Sudan, South Sudan
Southern: Kenya, Malawi, Mozambique, Tanzania, South Africa, Zambia, Zimbabwe.
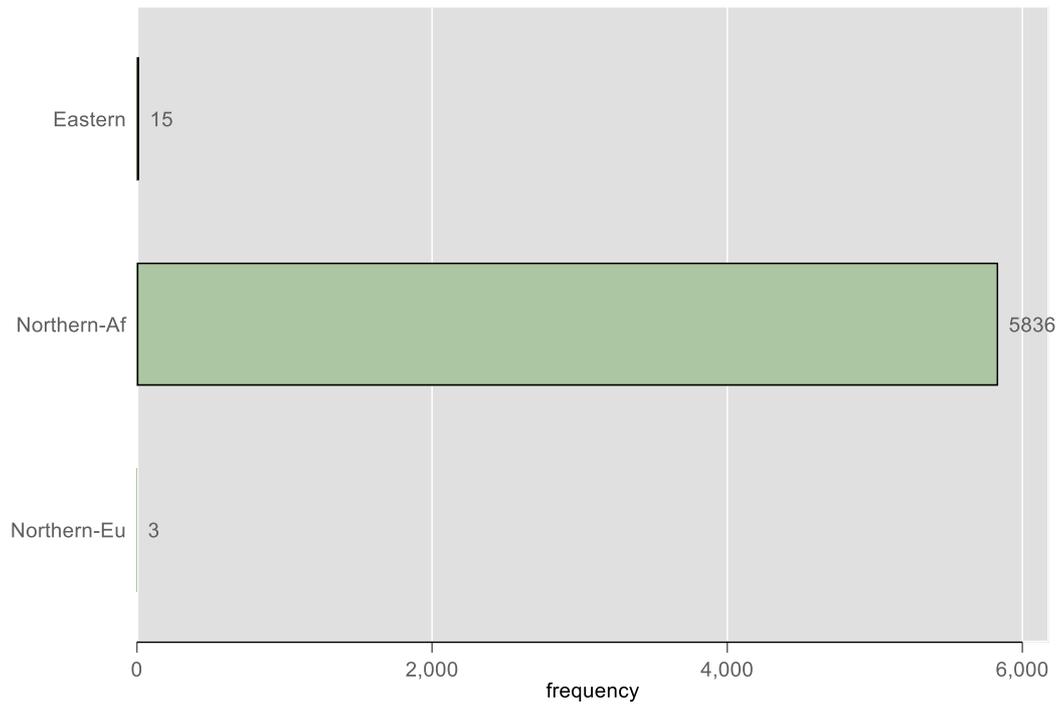
Figure 2 Migration routes for the universe of eligible returnees in Sudan

Across all countries and routes the majority of returnees were male. Overall, 86.3% of returnees in the universe were male, including 88.6% in Sudan. The mean age of returnees was 29.2 in Sudan, with a median of 28. As expected, most returnees are adults, with just 6.3% being aged under 18.
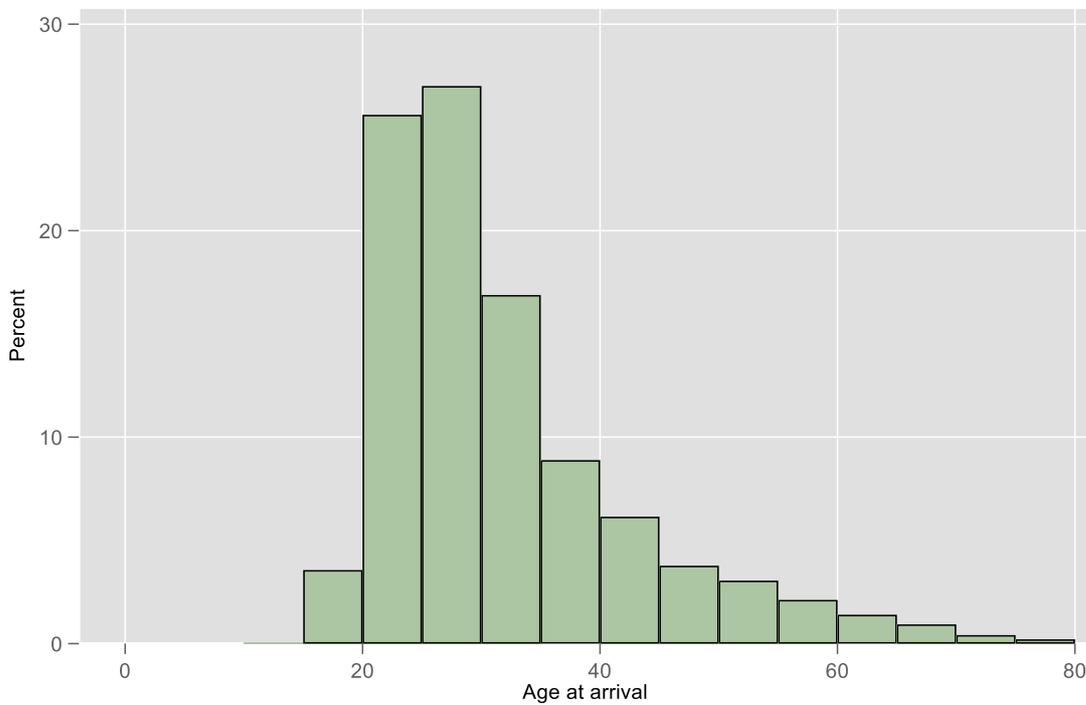
Figure 3 Histogram of returnees' age at arrival for the universe of eligible returnees in Sudan (bin width of five)
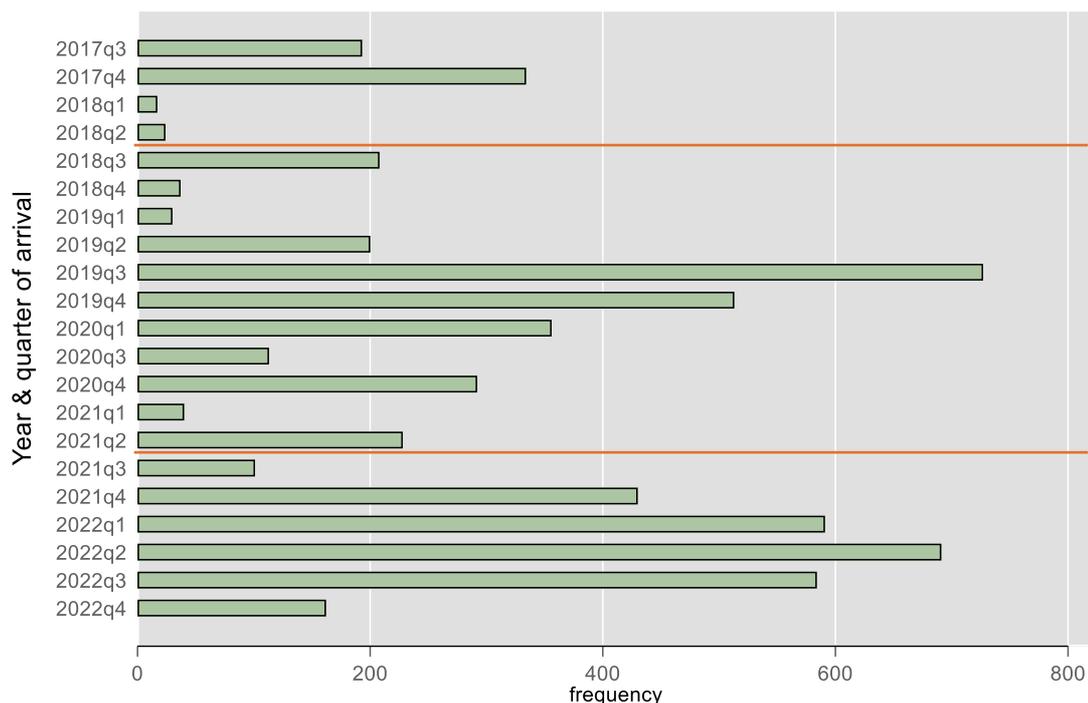
Figure 4 Year and quarter of arrival for the universe of eligible returnees in Sudan

Figure 4 presents the year and quarter of arrival for Sudanese returnees. This is valuable not just because of the sample criteria (arrival between 1 July 2018 and 1 July 2021), but also because of the changes made to the programme delivery since the first arrivals. Based on this, efforts were made to weight the non-migrant RSS sample according to the proportion of returnees falling into each year and quarter category.

3   Design and methodology

The full evaluation of design and methodology is presented in an external annex. The following section provides the key details necessary to understand the content of this report, as well as some modifications to the design and methodology that were made in Ethiopia. The design and methodology was developed during the IMPACT inception phase and detailed in the Methodological Report.[6]

3.1   Methodological approach

3.1.1   Criteria for returnee eligibility to the IMPACT sample frame

Details about the population of returnees and eligibility for the RSS is provided in section 2.

The latest Sudan country monitoring data, as of September 2022, includes 5,871 returnees, of which 1,837 were considered 'eligible' for the sample after applying the criteria above. The country monitoring dataset of eligible returnees, with returnees identified as 'treated' or not, was merged against the returnees enumerated by RSS+ and RSS retro respondents. This resulted in a universe of valid returnees also enumerated by the RSS endline-retro-baseline of 617 after the removal of duplicates, incomplete entries, in addition to the criteria listed above.

3.1.2   Calibration group identification methods (snowball, independent)

Most of the non-migrants have been recruited through a snowball sample process that starts with contacting a returnee who has completed an RSS enumeration and asking if they will participate in identifying a suitable non-migrant, aligned with age sex educational attainment, and length of residency in the current community. The returnee was given a period of time to identify a suitable non-migrant match, and the non-migrant identity and matching criteria were collected from the returnee in a follow-up call. The veracity of the matching criteria was subsequently checked with the non-migrant during the researchers' first non-migrant contact. If this validation found that the non-migrant did not have the qualifying matching criteria, the process was stopped. The returnee was recontacted and given the feedback and given an opportunity to suggest a more suitable non-migrant; however, the frequency of this occurring was very low.

In total 1,370 Sudanese returnees were contacted in an attempt to identify a matched non-migrant. 714 returnees agreed to participate and attempt to identify suitable non-migrants, resulting in a total of 371 matched non-migrants.

For a small minority of cases (13 in the case of Sudan), independent selection of non-migrants was undertaken where returnees could not be contacted at all with any of the telephone numbers previously recorded. In these cases, fieldwork teams travelled to the communities in question and independently matched non-migrants against the returnee profiles. The independent sampling approach was only applied for a short period before the second wave of the pandemic and political instability in Sudan stopped in-person fieldwork activities.

3.1.3   Sampling strategy

The minimum sample size calculated for returnees and non-migrants alike was 473 per analytical domain. This is based on the minimum sample size needed to detect a binary distribution with a minimum observable treatment effect of 7% centred around a 0.5 binary Frequency. A finite population factor derived from the total number of eligible returnees recorded in the Sudan monitoring data (N=1,837) was used to modify this minimum sample size downwards to 391 (see

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[6] Itad (2020). Methodological Report, IMPACT – Impact Evaluation of the EU-IOM Joint Initiative for Migrant Protection and Reintegration in the Horn of Africa Region, October 2020. Available at https://www.itad.com/knowledge-product/methodological-report-impact-evaluation-eu-iom-joint-initiative-migrant-protection-reintegration/

Table 3). The total of 657 returnee RSS+ retro-endline enumerations surpasses the minimum sample size of 391, and three quarters were under-sampled albeit by a small number of returnees, otherwise all other quarters were over sampled.

Table 3 Eligible returnee universe, returnee RSS+ endline-retro-baseline enumerations and matched non-migrant RSS+ endline-retro-baseline enumerations

Yr_Q1-4	Eligible Returnee universe	Returnee universe %	Target Sample Proportional to Qrt size	Enumerated RSS (ONLY ELrBL Treated)	Returnee Additional Over/ Under Sample	Non-Migrant RSS enumerated (ONLY Treated ELrBL)	Non-Migrant RSS Over/ Under Sampled ELrBL
2018q3	178	8.53	38	36	-2	27	11
2018q4	26	1.36	6	6	0	5	1
2019q1	20	0.98	5	4	-1	2	3
2019q2	182	7.98	39	59	20	41	-2
2019q3	654	28.95	138	145	7	101	37
2019q4	361	17.02	76	150	74	84	-8
2020q1	180	12.69	38	135	97	58	-20
2020q2	0	0	0		0	0	0
2020q3	75	3.61	16	34	18	21	-5
2020q4	95	5.01	20	38	18	11	9
2021q1	27	1.27	6	7	1	3	3
2021q2	39	6.83	9	43	34	18	-9
Totals	**1837**	**94.23**	**391**	**657**	**3**	**371**	**44**

The non-migrant snowball sampling identifies one non-migrant for each returnee. The non-migrant enumerations fell short of the minimum sample size of 391 with 371 completed retro-baseline-endline RSS+ enumerations. However, since some quarters were not able to reach their quota non-migrants, meaning overall there is a shortfall of 64 endline-retro-baseline non-migrant enumerations matched to returnees to reach the minimum sample size for each quarter (final column, Table 3).

As Table 3 indicates, the sample was targeted to be representative of quarters and there was no possibility to encounter a spatial targeting. This was because at the outset the prospective flows of returnees returning to various regions of Sudan was unknown. Figure 5 and Figure 6 presents the eligible universe of returnees, RSS+ endline-retro-baseline returnee enumeration and finally, matched non-migrant RSS+ endline-retro-baseline enumerations
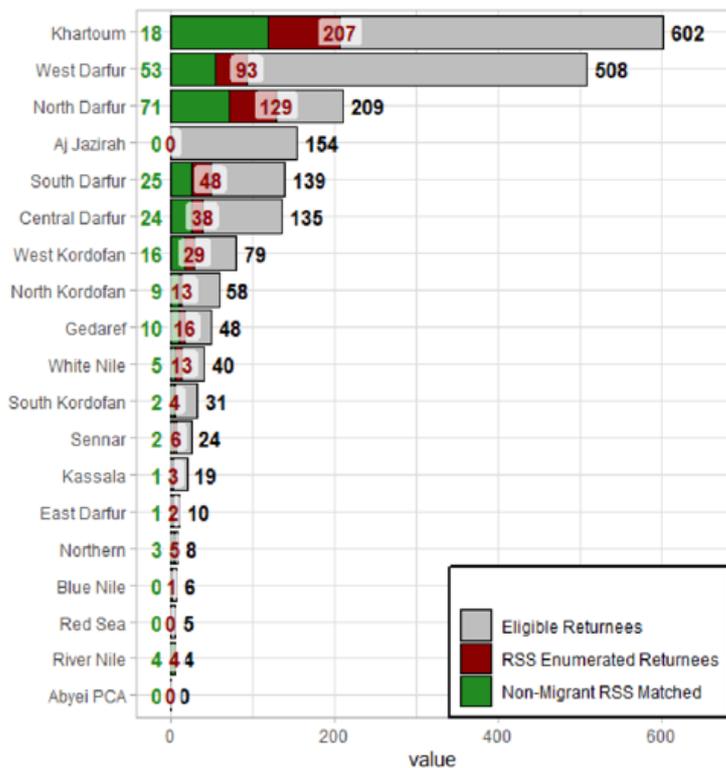
Figure 5 Bar chart of number of eligible returnees, number of those enumerated with endline-retro-baseline RSS, and number of those matched with non-migrant RSS
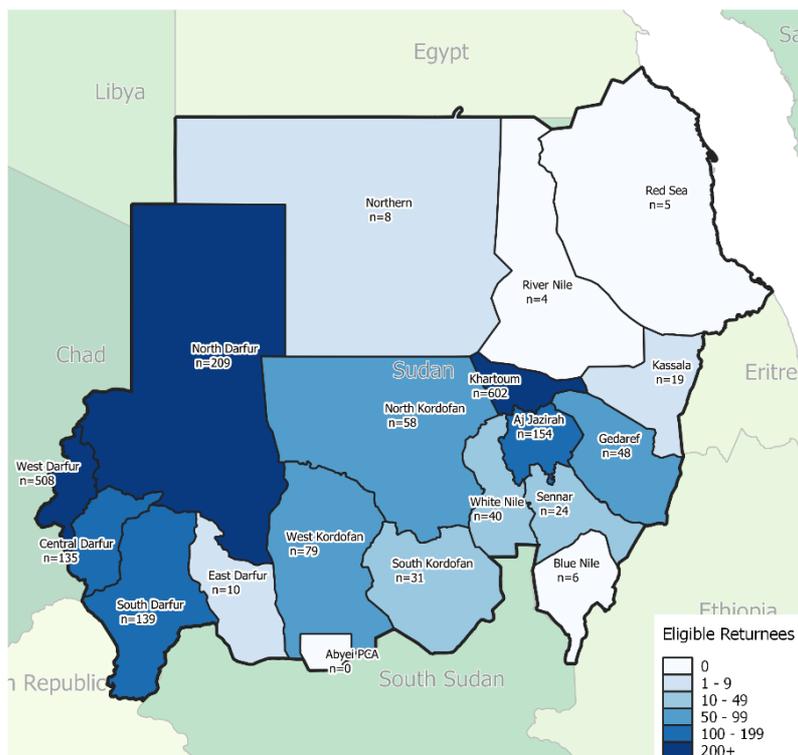
Figure 6 Map of Sudan regions with the number of eligible returnees

3.2   Changes to methodology and resulting limitations

3.2.1   Challenges to IMPACT data collection and adaptions implemented

The COVID-19 pandemic wrought several changes to this project. It was initially envisaged that there would be in-country work to provide the opportunity to develop and test the tools; and that all data collection would take place in-person. However, this was not entirely feasible under the circumstances. Additionally, because of the smaller returnee flows resulting from the pandemic, the RSS non-migrant enumeration was focused on combined endline-retro-baseline enumerations only.

Early enumeration in Sudan included contemporaneous baseline questionnaires, but the pandemic reduced, or even halted, the flow of returnees. As such, in 2021-Q4, a decision was taken to focus all further enumerations solely on combined endline-retro-baselines and continue enumerating to achieve the minimum sample size for this combined survey alone. At this point, the trajectory of the pandemic was still uncertain, and therefore having a minimum sample size of endline-retro-baseline surveys would be the most efficient and effective way to ensure a sufficient sample to produce estimates with the minimum desired precision of estimation.

Changes to the cut-off point of eligible returnees were also required as a response to methodological and fieldwork challenges. Prior to 2021-Q4, the range of arrival dates considered for returnee enumeration went back as far as 2019-Q3. The choice of the arrival dates reference period was based on the assumption that remembering a situation two months after returning, more than 1.5 years after that return, would present recall challenges for respondents. However, to increase the likelihood of reaching a minimum sample size for treatment effect precision, and the number of available returnees with whom to match non-migrants, the eligibility criteria for arrival time was adjusted to include the period starting from the third quarter of 2018.. The cut-off was agreed with IOM as, prior to this, the JI-HoA had encountered many challenges, many of which had been identified and resolved by this point. Despite the risks associated with exacerbating recall challenges, returnees who had arrived during the early stages of implementation of the Joint Initiative (JI) programme would also be included in the sample by widening the treated arrival period and going further back in time. As a result of widening the arrival date eligibility period, the length of time after arrival that the contemporaneous endline portion of the retro-endline survey is conducted will extend much further than the programme recommended 12–18 months. As reintegration is unlikely to be a monotonic asymptotic process across the entire time between arrival and endline observation, it will increase the likelihood that there will be a length after arrival bias to the endline observations, but without any mechanism for controlling or accounting for this potential bias.

The final enumeration strategy is to match all returnee RSS endline-retro-baseline enumerations with a matched non-migrant RSS endline-retro-baseline enumeration.

3.3   Data quality

There are two questionnaires used to collect returnee RSS data:

1. **RSS+**: an early version of the RSS returnee instrument that did not include retro-baseline enumeration, because at that time it was still hoped that the flow of returnees would allow contemporaneous baseline and endlines to be enumerated in sufficient numbers.

2. **RSS+ retro**: current version with retro-baseline questions for all RSI variables and additional questions included in the RSS+.

All returnee enumerations were managed by IOM regional/country staff with enumerators recruited locally as appropriate.

3.3.1   Ease of recall for retro-baseline responses

While retrospective data is often believed to produce more negative and unreliable answers, recent research has shown mixed results.[7] Recalled answers can be reasonably accurate for events remembered within five years or less, but cognitive complexity and demand can affect accuracy. It does appear that reliable retrospective information can be collected on events that people remember within a recall period of two years or less, especially if questions are linked to significant events in the respondent's life. For returnees, their return from migration should be such a significant anchoring event, which supports the validity of their retrospective enumeration. However, non-migrants may be less reliable at recalling perceptions and situations without such a significant anchoring event.

Detailed examination of retrospective enumeration, including analysis of IMPACT data, can be found in the Technical Annex. The three key findings from this analysis are as follows:

Finding 1: Returnees that indicated recall ease had a significantly higher average retro-baseline Overall RSI scores compared to the natural recall category, but given the lack of trend in the Overall RSIs, this may not be related to ease of recall. Non-migrants did not exhibit any significant differences between retro-baseline Overall RSI scores.

Finding 2: Returnees that indicated recall ease had significantly higher average retro-baseline reintegration perception scores compared to the neutral recall category, but given the lack of trend in the reintegration perception scores this may not be related to ease of recall. Non-migrants did not exhibit any significant differences between retro-baseline integration perception scores.

Finding 3: Difficulty of recall was statistically significantly less likely to be experienced by returnees and non-migrants, but no other demographic characteristics were predictive of ease of recall.

3.4   Qualitative methods

3.4.1   Objectives

The qualitative research supports and complements the Impact Evaluation and Natural Experiment components. The qualitative data provides in-depth information on returnees' experiences and well-being, and supports the interpretation and understanding of the quantitative data. The objectives of the qualitative data collection are:

1. To test and validate findings and results from the RSS survey enumeration.

2. To deepen our understanding of the effect of the migration experience on returnees (how the migration and return experience has impacted individuals).

3. To deepen our understanding of the impact of the EU-IOM JI programme on sustainable reintegration of returnees.

4. Explore the use of the W model approach for sustainable reintegration and reflect on qualitative methodologies for measuring sustainable reintegration.

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[7] Denison, J. (2022). Using Retrospective Survey Measurement in Assessing Migrant Reintegration: Evidence from IOM programmes in Ethiopia, Somalia, and Sudan, available at https://returnandreintegration.iom.int/en/resources/study/using-retrospective-survey-measurement-assessing-migrant-reintegration-evidence-iom

3.4.2 Approach

Two field sites were selected for the qualitative research based on areas with high numbers of returnees in the RSS impact evaluation. The final field sites were Khartoum and South Darfur.

Following from the IMPACT study quantitative findings presented in this report, a core objective of the qualitative methods and approach was to further explore the differences between returnees and their matched non-migrant pairs. In each location eight interviews were conducted with returnees and eight interviews were conducted with their matched non-migrant pairs, totalling 16 matched pairs for analysis across two locations. In total, 32 respondents participated in key informant interviews (KII). All respondents were male. The average age of non-migrants was 33 and the average age of returnees was 31. Eleven returnees had received cash assistance and five returnees' non-cash. Due to the small numbers the qualitative results cannot be conclusive regarding differences in cash modalities for assistance. Most respondents returned from Libya and a small number from Algeria.

Two focus group discussions were also held with some of the returnees and matched non-migrants to understand perspectives on community well-being in Darfur and six discussions with family members of returnees were held to understand their experiences and perspectives of the reintegration process. Data collection was conducted in-person in January and February 2023.

3.4.3 Analysis

All interviews were transcribed and coded using MaxQDA software. The coding techniques focused primarily on deductive coding to understand returnees' experiences, differences between returnee groups, and the W model for understanding reintegration. An additional analysis was conducted to understand differences between the matched pairs and is discussed in section 4.9.

While in the other two country reports for IMPACT (Ethiopia and Somalia), qualitative case study boxes were populated throughout the reports, this report does not include any case studies. The Sudanese qualitative results consistently produce results that do not necessarily align with the quantitative results meaning that the case study boxes were not useful to further explain the results. This is explored further in section 4.9. The possible reasons behind this are multiple:

1. The quantitative and qualitative data collection was at different times, the longest gap between the endline-retro-baseline RSS enumeration and the qualitative research being 12 months and the shortest just six (see Figure 7). Clearly, the longer the time between the two observations, the more likely we are interviewing returnees in quite different situations.

2. When the returnees were asked to reflect on their situation upon return, the qualitative focus was immediately upon return, whereas the retro-baseline focus was 2–3 months after return once they had arrived and spent some time in their community of reintegration.

3. The RSI has a specific weighting, while the subjective indicators allow the returnee to place value on what is important to them. Therefore, there may be a clear misalignment between these two indicators based on the returnees' feelings and perceptions rather expert universal weights.
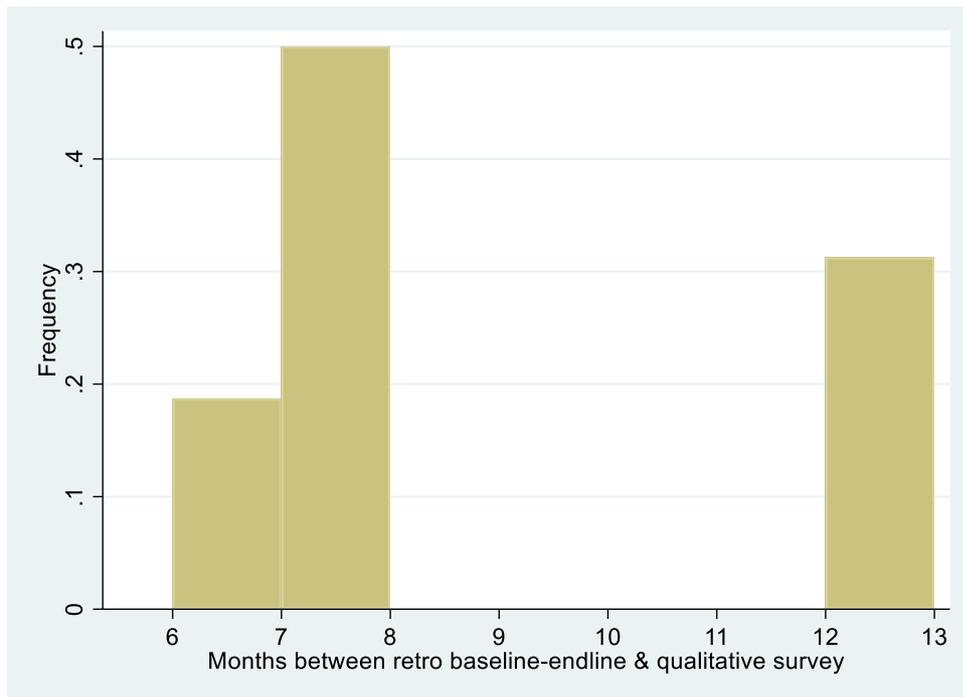
Figure 7 Histogram of the number of months between the RSS endline-retro-baseline and the qualitative survey for the same returnee

4 Measures of reintegration

4.1 Methods for measuring reintegration

Recognising the inherent difficulties in the measurement of complex concepts such as reintegration, where no single measure is widely accepted, we draw on multiple analytical frameworks for measuring reintegration. This approach has enabled us to compare and contrast findings, build on the strengths and mitigate for weaknesses of the different approaches. The following four frameworks are used for calculating reintegration indices:

1. **RSI: Reintegration Sustainability Index**: the IOM institutional RSI index for measuring reintegration using reintegration drivers and their associated dimension and overall weights, informed by a combination of principal components analysis, reviewed, and modified by expert consensus. This provides easy interpretation of values, standardised procedures and data, and comparability over time and locations using fixed 'expert' weights for weighting overall and within dimensions. Below we analyse both the Overall RSI and the individual dimensions.

2. **RSI MIMIC: Multiple Indicator Multiple Cause (MIMIC)** models generating a latent (unknown) reintegration sustainability index not reliant on defined weights, instead using structural equation modelling and data correlation matrices to define the weighting structure for an individual dataset (RSI MIMIC). **MIMIC** models allow multiple outcomes to be modelled simultaneously. This class of model have recently been applied to the challenge of measuring resilience, another multicomponent outcome.[8] We apply MIMIC models both to the Overall RSI and the individual dimensions.

3. **Non-migrant identity:** A propensity (percentage degree of similarity) that returnees have similar profile to paired non-migrants (paired on sex, age, educational attainment, length of residence in community, no plans to migrate currently).

4. **Integration perceptions:** Self-perceptions of own level of reintegration (if a returnee returning to pre-migration community), integration (if returnee returning to a new community or non-migrant).

The remainder of this section contains analysis of each of these analytical frameworks in turn. The following sub-sections include lists of key takeaways which summarise the most important outcomes from the analysis, as well as a set of findings that highlight the key conclusions and implications of the analysis.

First the data from all returnees responding to the endline-retro-baseline RSS + survey are presented for the four RSI measures; Overall, Economic, Social and Psychosocial (4.1 & 4.2).

This is followed by the matched returnee-non-migrant cohorts, where the number of returnees is reduced compared to the previous analysis because not enumerated retro-endline returnees were successfully matched with a corresponding non-migrant that also completed the endline-retro-baseline RSS + survey (4.3 & 4.4).

The following sections introduce the three alternative measures of reintegration, analysing the matched returnee–non-migrants cohorts.

4.2 Overall RSI

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[8] FAO (2016). Resilience Index Measurement and Analysis – II Food and Agriculture Organization of the United Nations Rome Resilience Index Measurement and Analysis (RIMA) | Agrifood Economics | Food and Agriculture Organization of the United Nations (fao.org) last visited 21/04/2022.

The returnee endline-retro-baseline RSS+ data is the starting point for this Sudan analysis. The endline-retro-baseline data are collected during a single data collection event, where both the endline and a recall baseline are enumerated. (See Methodological Annex for a detailed explanation and justification of this method.)

The assistance was delivered across the period of the onset of the COVID-19 pandemic and its associated restrictions. In the case of Sudan, both MoMo and substitution of in-kind provision of microbusiness support to direct cash payments to returnees were programme adaptions to speed up the assistance delivery to returnees. The in-kind modality, consisting of in-kind support provided to the returnee after a three-quote tender process, was seen as administratively demanding and time-consuming. The MoMo and the in-kind modality are presented as separate analytical cohorts, despite only 29 returnees (23 matched, 29 in total) in the sample receiving assistance through in-kind modality.

If the restrictions due to COVID-19 were going to affect the building and sustainability of the microbusiness, then these two could form interesting comparison groups. The observational period was divided into those returnees receiving the microbusiness grant before 1 October 2019 and those receiving it after. The rationale being that those receiving the microbusiness grant up to 6 months before the onset of the COVID-19 linked shock would face particular challenges in establishing a new microbusiness. Whereas those receiving it earlier than October 2019 would have had a longer opportunity to establish a mature their microbusiness. In reality, there were only 30 Sudanese returnees receiving assistance before 1 October 2019, and 29 of those were in-kind modality, and just 23 of these had corresponding matched non-migrants (see Table 4).

Table 4 Endline-retro-baseline frequency by programme assistance modality cohorts; disaggregated by microbusiness received more than six months before the onset of COVID-19 lockdown measures (1 October 2019) or later

Assitance Modality	Total	<01Oct2019	>=01Oct2019
Cash <= 4 months	144	0	144
Cash > 4 months	321	0	321
MOMO	163	1	162
Old Modality	29	29	0
Total	657	30	627

Finding 4: There is an overall slight decline in RSI scores over time. The Cash <=4mths performed best on average over the course of the evaluation, while in-kind modality and MoMo cohorts resulted in an endline RSI score significantly lower than both the Cash <=4mths cohort and the notional 0.66 threshold score.

Figure 8 presents the Overall and three dimension RSI values for the four returnee cohorts for all endline-retro-baseline enumerations without filtering to returnees that have a matched non-migrant RSS+ (N=657). The average retro-baseline and endline Overall RSIs for these three cohorts are presented with 95% confidence intervals. Within this graph there are three comparisons against which the **in-kind modality** of providing assistance to returnees can be compared; against the cohort that received the cash assistance the soonest after return **(Cash <=4mths, n=122, 22%)** and for those that the new modality of cash came much later after their return (**Cash >4mths, n= 321, 49%**), and those that received in-kind assistance, but with payments to the providers through mobile money (**MoMo, n=29, 4.4%**).

The results in Figure 8 show that those returnees in the Cash <=4mths cohort experienced a decline in the Overall RSI scores, though this was not significant. The three other cohorts experienced small and insignificant increases in their RSI scores from baseline to endline. This is confirmed by the

analysis in Table 6. This decline in the Overall RSI for the **Cash >4mths** cohort was largely driven by the performance in the Economic RSI dimension (Figure 8).
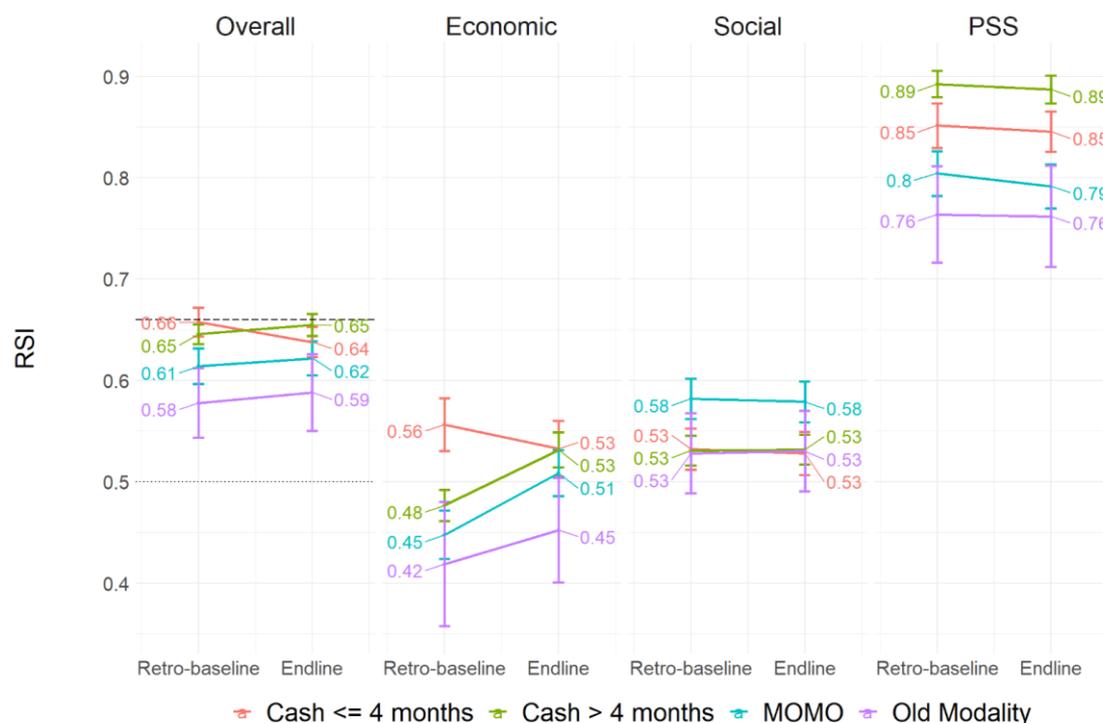
Figure 8 4 Dimensions of RSI at retro-baseline and endline for all eligible returnees
N=657, Cash<=4mths=144, Cash>=4mths=321, MoMo = 163, in-kind modality=29)

Table 5 Difference in difference (DID) calculations for Overall RSI for the four returnee groups presented in Figure 8
Reference levels = retro-baseline Cash <=4mths

Term (returnees)	estimate	std error	statistic	p-value
Intercept	0.66	0.01	81.24	0.00
Endline	-0.02	0.01	-1.72	0.09
Cash > 4 months	-0.01	0.01	-1.23	0.22
MoMo	-0.04	0.01	-3.92	0.00
In-kind modality	-0.08	0.02	-4.03	0.00
DID – Endline X Cash > 4 months	0.03	0.01	2.10	0.04
DID – Endline X MoMo	0.03	0.02	1.75	0.08
DID – Endline X in-kind modality	0.03	0.03	1.07	0.28

Key takeaways for Overall RSI changes – returnees only
There is non-significant retro-baseline-endline decline, (p-value = 0.09, Table 5), indicating that there a non- statistically significant decline in RSI scores overtime
MoMo & in-kind modality cohorts registered statistically significantly lower retro-baseline RSIs compared to the Cash <=4mths cohort (Table 5)
DID for both MoMo/in-kind modality and Cash >4mths are positively significant, which explained by the fact that the Cash <=4mths cohort has a negative retro-baseline-in-line slope and the other two cohorts have a positive slope

4.3 RSI dimension scores

The following sub-sections present the analysis and findings for each of the individual RSI dimensions: Economic, Social and Psychosocial.

Finding 5: The three individual dimensions perform differently to the Overall RSI across the three cohorts of returnees. The MoMo in-kind modality cohort have significantly higher baseline and endline scores under the Social dimension, but return the lowest scores for the Economic and Psychosocial dimensions.

Finding 6: MoMo/in-kind modality and Cash >4mths return significantly positive DIDs for the Economic dimension, indicating that their RSI scores improve significantly more than the Cash<=4mths cohort. However, there are no significant DIDs in the Social or Psychosocial dimensions.

4.3.1 RSI Economic

The analysis above is repeated for the Economic dimension of the RSI only, with similar results. Overall returnees there is a non-statistically significant decline in RSI between retro-baseline and endline (p-value = 0.19, Table 6). Both the **MoMo, in-kind modality** and **Cash >4mths cohorts** are significantly lower than the **Cash <=4mths** Cohort at baseline, but by endline all but the in-kind modality cohort have statistically converged.

There are significant positive **DIDs** for both **MoMo and Cash >4mths.** This confirms what can be clearly seen in Figure 8; a significantly different slope to that of the **Cash <=4mths** cohort, clearly seen by the increasing slopes of the former compared to the decreasing slope for **Cash <=4mths.**

Table 6 Difference in difference calculations for Economic dimension RSI for three returnee groups presented in Figure 8. Reference value = retro-baseline Cash <=4mths

Term (returnees)	estimate	std error	statistic	p-value
Intercept	0.56	0.01	43.72	0.00
Endline	-0.02	0.02	-1.32	0.19
Cash > 4 months	-0.08	0.02	-5.21	0.00
MoMo	-0.11	0.02	-6.24	0.00
In-kind modality	-0.14	0.03	-4.43	0.00
DID – Endline X Cash > 4 months	0.08	0.02	3.63	0.00
DID – Endline X MoMo	0.08	0.02	3.43	0.00
DID – Endline X in-kind modality	0.06	0.04	1.30	0.19

4.3.2 RSI Social

Next, we consider the social dimension of the RSI, with results showing that numerically and statistically there is no change in RSI Social scores from baseline to endline for any of the cohorts (Table 7). However, **MoMo r**eturnees have significantly lower baseline and endline values than **Cash <=4mths**.

Table 7 DID calculations for Social dimension RSI for the three returnee groups presented in Figure 8.
Reference value = retro-baseline Cash <=4mths

Term (returnees)	estimate	std error	statistic	p-value
Intercept	0.53	0.01	49.01	0.00
Endline	-0.00	0.02	-0.30	0.77
Cash > 4 months	-0.00	0.01	-0.12	0.91
MoMo	0.05	0.01	3.33	0.00
In-kind modality	-0.00	0.03	-0.16	0.87
DID – Endline X Cash > 4 months	0.01	0.02	0.30	0.77
DID – Endline X MoMo	0.00	0.02	0.08	0.94
DID – Endline X in-kind modality	0.01	0.04	0.18	0.86

4.3.3 RSI Psychosocial

Finally, we analyse the Psychosocial (PSS) dimension of the RSI, finding that at retro-baseline, all three cohorts are significantly different **Cash <=4mths** (Figure 8 & Table 8), with **Cash >4mths** having the highest Psychosocial RSI and **in-kind modality** the lowest. The DID analysis for the trends displayed in Table 8 all confirm that the trendlines are statistically indistinct, and the endline term with a p-value of 0.69 indicates no significant retro-baseline-in-line change, indicating that all four modality lines are statistically flat.

Table 8 DID calculations for Psychosocial dimension RSI for the three returnee groups presented in Figure 8.
Reference value = retro-baseline Cash <=4mths

Term (returnees)	estimate	std error	statistic	p-value
Intercept	0.85	0.01	79.59	0.00
Endline	-0.01	0.02	-0.40	0.69
Cash > 4 months	0.04	0.01	3.17	0.00
MoMo	-0.05	0.01	-3.22	0.00
In-kind modality	-0.09	0.03	-3.36	0.00
DID – Endline X Cash > 4 months	0.00	0.02	0.05	0.96
DID – Endline X MoMo	-0.01	0.02	-0.32	0.75
DID – Endline X in-kind modality	0.00	0.04	0.11	0.91

Key takeaways for RSI dimension changes – returnees only
1. While the Overall RSI gives the impression of somewhat similar performance across the four modality cohorts, the patterns are different at the RSI dimension level. The retro-baseline RSI Overall scores range from a lowest baseline value of 0. 58 (**in-kind modality**) to a highest retro-baseline value of 0.66 (**Cash <=4mths)**. These are all relatively high retro-baseline Overall RSI scores, with the normative threshold for sustainable reintegration being 0.66.
2. The Economic RSI performance is the only dimension where there is significant improvement between retro-baseline and endline for **Cash >4mths** and **MoMo**, but not for in-kind modality and **Cash <=4mths,** with the latter being the only cohort that registered a non-significant numerical decline**.**
3. There is a significant change in rank among the cohorts between the dimensions. In the Economic dimension **Cash <=4mths** is better at baseline but then converges with **Cash >4mths** at endline. For the Social dimension, all three cohorts with the exception of **MoMo** are essentially the same flat horizontal line at 0.53. Whereas for the Psychosocial dimension, **Cash >4mths** performs consistently and significantly better are both baseline and endline, although with no perceivable trend across these two.

4.4 RSI Overall – matched returnees and non-migrants

Given that the treatments for Sudan all consist of providing microbusiness or equivalent support, and the variation between the three analytical cohorts is method of procurement, comparing the returnee performance with those of the corresponding non-migrants may provide a calibration group that calibrates the performance of each of these mode of procurement cohorts.

The analysis presented in this section is performed using only the matched returnee-non-migrant paired data, unless indicated otherwise. This reduces the returnee sample down from 657 in the returnee only RSI analysis above to 371 returnees. These 371 returnees have 1:1 matches with non-migrants, matched on age, sex and educational attainment level. Both returnees and non-migrants were enumerated with the endline-retro-baseline survey (Table 9).

Table 9 Endline-retro-baseline frequency of matched pairs of returnees and non-migrants by procurement modality

Procurement modality	N	Returnees	Non-migrants
Cash <=4mths	122	61	61
Cash>4mths	336	168	168
MoMo/in-kind modality	284	142	142
Total	742	371	371

4.4.1 Overall RSI scores – matched returnees and non-migrants

Finding 7: Unexpectedly, returnees in three out of four treatment cohorts returned significantly greater Overall RSIs than their corresponding non-migrants, both at baseline and at endline. However, there is no significant improvement over time for any of the returnee or non-migrant cohorts.

We begin with the Overall RSI retro-baseline-endline group with 371 1:1 matched returnee-non-migrant pairs. The analysis shows that:

1. The retro-baseline-endline changes in returnee Overall RSI for this reduced sample of 371 show the similar patterns observed in the larger sample of 657 returnees (Figure 8, with the exception being the minimal number of 23 returnees that received microbusiness support via in-kind modality.

2. The **non-migrant cohort trends statistically do not deviate from a flat line between retro-baseline and endline** and are significantly below the normative 0.66 threshold line (Figure 9).

3. **All returnee cohorts showed no significant increase or decrease in their Overall RSI score from baseline to endline** (Figure 9 & Table 9).
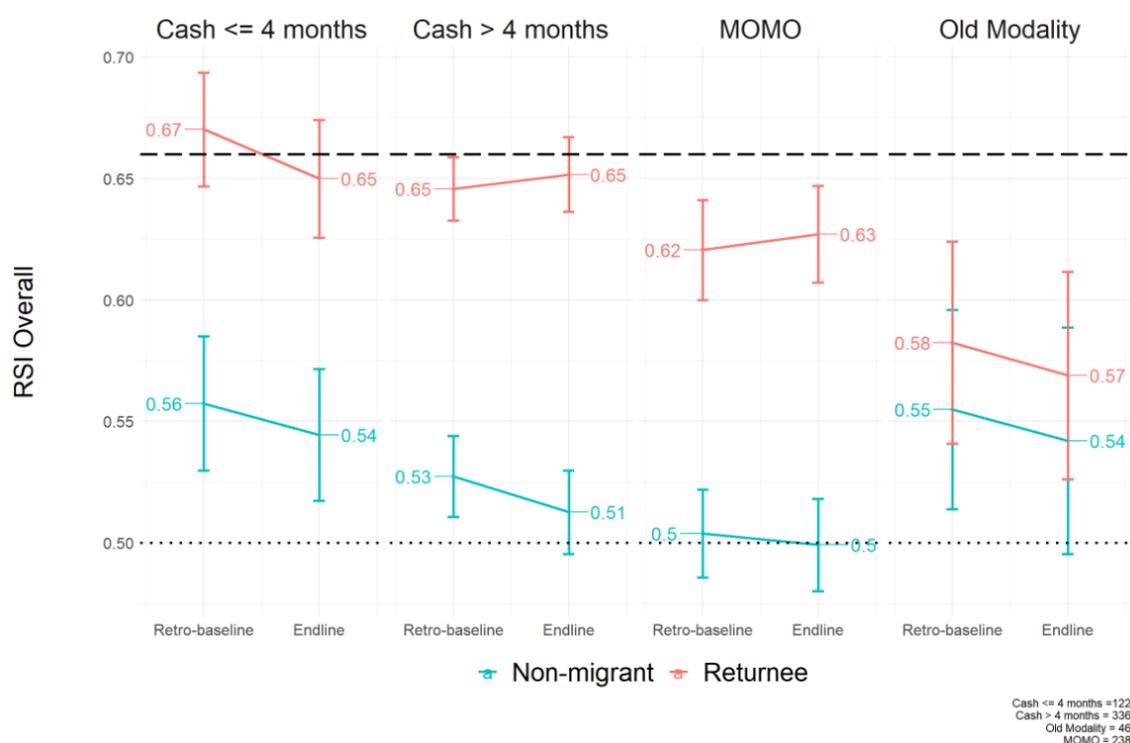
Figure 9 Overall RSI at retro- and endline for matched returnee-non-migrants (
N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23

Table 14 presents four separate DID analyses by procurement modality. All confirm the lack of significant trends seen in Figure 9. All but in-kind modality returnee cohorts have significantly greater retro-baseline Overall RSIs than their corresponding non-migrant cohorts. All four procurement modalities have non-significant DIDs, indicating that there are no statistically significant differences in the gradients between the returnees and the corresponding non-migrants for each of the three procurement modalities.

Given that there are no significant endline effects, nor DIDs, indicating that there is no statistically significant differences in the gradients between the procurement modalities within returnees or non-migrant, essentially there is no trend in any of the cohorts.

Table 11 indicates that for the returnee cohorts, the MoMo and in-kind modality have significantly lower RSIs at retro-baseline than the reference modality of **Cash <=4mths**. Whereas for non-migrants, it is only MoMo that is significantly lower than **Cash <=4mths**.

Key takeaways for Overall RSI changes – returnees-non-migrant matched
1. Returnees in three cohorts in both observation points return statistically significantly greater Overall RSIs then their corresponding non-migrants, with the 23 returnees and non-migrants in the in-kind modality still indicating greater returnee baseline and endline scores, but not significantly so.
2. For returnees receiving MoMo, their retro-baseline Overall RSI was significantly lower than Cash <=4mths. Whereas for non-migrants, it is only those receiving MoMo for whom the retro-baseline Overall RSI is significantly lower than the other three cohorts (Figure 9 and Table 11).

Table 10 Separate Overall RSI DID analysis for the individual treatment modalities
N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23.
Reference levels = Retro-baseline non-migrant Cash <=4mths, MoMo, in-kind modality, Cash >4mths

Term (cash < 4 months)	estimate	std error	statistic	p-value
Intercept	0.56	0.01	43.47	0.00
Endline	-0.01	0.02	-0.72	0.47
Returnee	0.11	0.02	6.21	0.00
DID – endline x returnee	-0.01	0.03	-0.28	0.78

Term (MoMo)	estimate	std error	statistic	p-value
Intercept	0.50	0.01	51.50	0.00
Endline	-0.00	0.01	-0.34	0.74
Returnee	0.12	0.01	8.43	0.00
DID – endline x returnee	0.01	0.02	0.57	0.57

Term (in-kind modality)	estimate	std error	statistic	p-value
Intercept	0.55	0.02	26.75	0.00
Endline	-0.01	0.03	-0.44	0.66
Returnee	0.03	0.03	0.94	0.35
DID – endline x returnee	-0.00	0.04	-0.01	0.99

Term (cash > 4 months)	estimate	std error	statistic	p-value
Intercept	0.53	0.01	66.53	0.00
Endline	-0.01	0.01	-1.31	0.19
Returnee	0.12	0.01	10.55	0.00
DID – endline x returnee	0.02	0.02	1.30	0.19

Table 11 Overall RSI DID analysis for returnees alone and non-migrants by the three modalities
N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23;
Baseline reference level = retro-baseline Cash <=4mths returnee (upper) and Cash <=4mths non-migrant (lower)

Term (returnees)	estimate	std error	statistic	p-value
Intercept	0.67	0.01	52.41	0.00
Endline	-0.02	0.02	-1.12	0.26
Cash > 4 months	-0.02	0.01	-1.63	0.10
MoMo	-0.05	0.02	-3.15	0.00
In-kind modality	-0.09	0.02	-3.59	0.00
DID – Endline X Cash > 4 months	0.03	0.02	1.24	0.22
DID – Endline X MoMo	0.03	0.02	1.20	0.23
DID – Endline X in-kind modality	0.01	0.03	0.19	0.85

Term (non-migrants)	estimate	std error	statistic	p.value
Intercept	0.56	0.01	40.72	0.00
Endline	-0.01	0.02	-0.67	0.50
Cash > 4 months	-0.03	0.02	-1.88	0.06
MoMo	-0.05	0.02	-3.18	0.00
In-kind modality	-0.00	0.03	-0.09	0.92
DID – Endline X Cash > 4 months	-0.00	0.02	-0.08	0.94
DID – Endline X MoMo	0.01	0.02	0.35	0.73
DID – Endline X in-kind modality	0.00	0.04	0.00	1.00

4.5 RSI dimension scores – matched returnee-non-migrants

Turning next to the individual RSI dimensions, it should be noted that horizontal reference lines have not been included for the RSI individual dimension graphs as thresholds for these dimensions have not been established.

Finding 8: All cohorts of returnees have dimension RSI scores which are greater than their corresponding non-migrant cohort. This confirms that the notion of convergence is not applicable in the case of Sudan.

Finding 9: There are also no significant increases in returnee reintegration scores from baseline to endline, with the exception of the Economic RSI for Cash>4mths and MoMo/in-kind modality, which both have positive retro-baseline-endline trends.

4.5.1 RSI Economic-matched returnee-non-migrants

Economic RSI retro-baseline-endline trends with 1:1 matched returnees-non-migrants show similar patterns in terms of rank and trend to those observed in the larger sample of 657 returnees (Figure 8), with the exception of the in-kind modality, which declines non-statistically in the matched dataset while increasing non-statistically in the full returnee dataset. Returnees continue to fare better than their non-migrant counterparts, with the **Cash >4mths**, **MoMo** and **in-kind modality** cohorts returning numerically lower scores at baseline and endline. Interestingly, while the **Cash>4mths** and **MoMo** cohorts have a positive gradient, the **Cash<=4mths** and small in-kind modality cohorts as their corresponding non-migrant trends, exhibit a slight non-significant decline from retro-baseline to endline (Figure 10).

In all cases except **in-kind modality**, retro-baseline Economic RSI was significantly greater for returnees than corresponding non-migrants (Figure 10). **In-kind modality** returnees scored numerically but not statistically higher than corresponding non-migrants at both retro-baseline and endline. **Cash >4mths** and **MoMo** returnees registered a statistically significant increase compared to their non-migrants (Table 12 and Figure 10). The in-kind modality cohort also shows retro-

baseline-endline flat lines for both returnees and non-migrants. For **Cash <=4mths**, returnees were significantly greater than the non-migrants across both observations, with both exhibiting a slight non-significant downward trend.

Cash >4mths and MoMo returnees had significantly greater retro-baseline gradients than the **Cash <=4mths**, which was the only modality to exhibit a decline in Economic RSI, albeit not statistically significant (Figure 10 and Table 13).
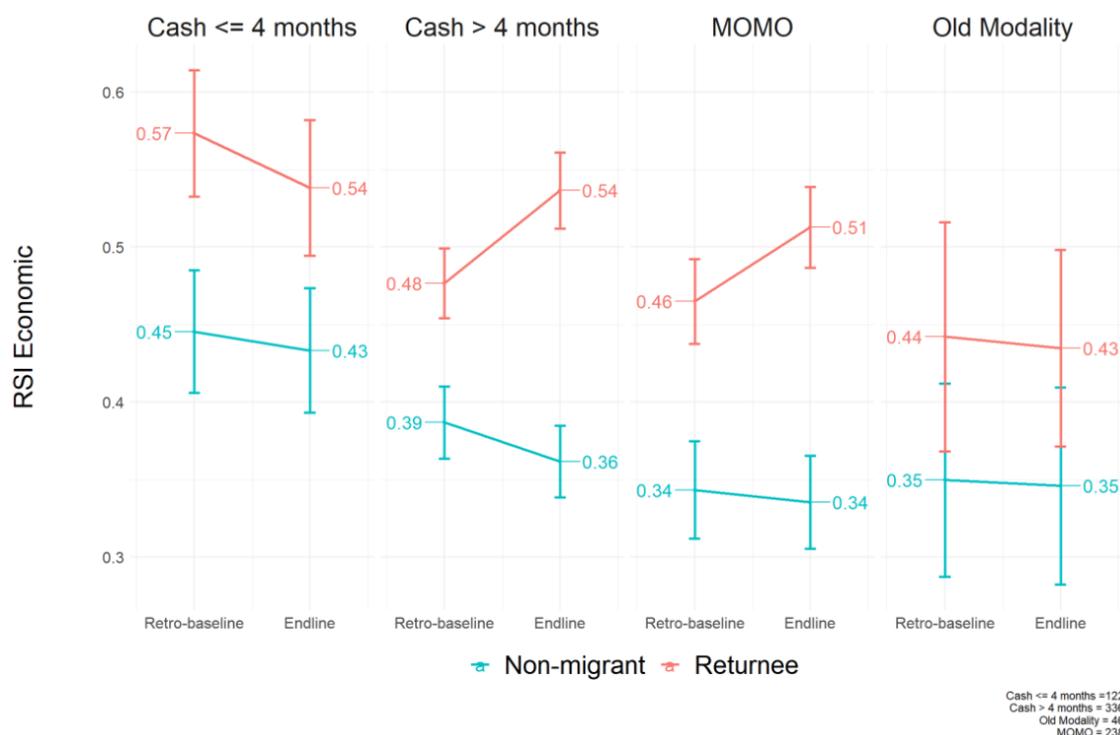
Figure 10 Economic RSI at retro-baseline and endline for matched returnee-non-migrants
N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23)

Table 12 Separate Economic RSI DID analysis for the individual treatment modalities
N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23.
Reference levels = Retro-baseline non-migrant Cash <=4mths, MoMo/in-kind modality, Cash <=4mths

Term (Cash less than 4 months)	estimate	std error	statistic	p-value
Intercept	0.45	0.02	21.70	0.00
Endline	-0.01	0.03	-0.42	0.67
Returnee	0.13	0.03	4.41	0.00
DID – endline x returnee	-0.02	0.04	-0.56	0.58

Term (MoMo)	estimate	std error	statistic	p-value
Intercept	0.34	0.01	23.62	0.00
Endline	-0.01	0.02	-0.38	0.70
Returnee	0.12	0.02	5.92	0.00
DID – endline x returnee	0.06	0.03	1.92	0.06

Term (in-kind modality)	estimate	std error	statistic	p-value
Intercept	0.35	0.03	10.99	0.00
Endline	-0.00	0.04	-0.08	0.93
Returnee	0.09	0.04	2.06	0.04
DID – endline x returnee	-0.00	0.06	-0.06	0.95

Term (Cash > 4 months)	estimate	std error	statistic	p-value
Intercept	0.39	0.01	32.81	0.00
Endline	-0.03	0.02	-1.51	0.13
Returnee	0.09	0.02	5.39	0.00
DID – endline x returnee	0.08	0.02	3.60	0.00

Table 13 Economic RSI DID analysis for returnees alone and non-migrants by the three modalities
N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23.
Baseline reference level = retro-baseline Cash <=4mths returnee (upper) and Cash <=4mths non-migrant (lower)

Term (returnees)	estimate	std error	statistic	p-value
Intercept	0.57	0.02	29.08	0.00
Endline	-0.04	0.03	-1.26	0.21
Cash > 4 months	-0.10	0.02	-4.21	0.00
MoMo	-0.11	0.02	-4.48	0.00
In-kind modality	-0.13	0.04	-3.49	0.00
DID – Endline X Cash > 4 months	0.10	0.03	2.92	0.00
DID – Endline X MoMo	0.08	0.03	2.42	0.02
DID – Endline X in-kind modality	0.03	0.05	0.52	0.60

Term (non-migrants)	estimate	std error	statistic	p-value
Intercept	0.45	0.02	22.06	0.00
Endline	-0.01	0.03	-0.43	0.67
Cash > 4 months	-0.06	0.02	-2.49	0.01
MoMo	-0.10	0.02	-4.12	0.00
In-kind modality	-0.10	0.04	-2.48	0.01
DID – Endline X Cash > 4 months	-0.01	0.03	-0.39	0.70
DID – Endline X MoMo	0.00	0.04	0.12	0.90
DID – Endline X in-kind modality	0.01	0.05	0.16	0.88

4.5.2 RSI Social-matched returnee-non-migrant

Considering the Social dimension of the RSI (Figure 11), we find that the retro-baseline-endline changes have similar returnee patterns in rank and trends observed in the larger sample of returnees of 657 returnees (Figure 8). As with the Overall and Economic RSI, the non-migrant cohort trends exhibit a non-significant slight decline from retro-baseline to endline, while all four returnee cohorts remain numerically flat.

Table 14 and Table 15 present the DID analysis for the Social RSI dimension. The results confirm that returnees fare significantly better than non-migrants across all three treatment cohorts and that there are no significant changes from baseline to endline for any of the returnee or non-migrant cohorts.
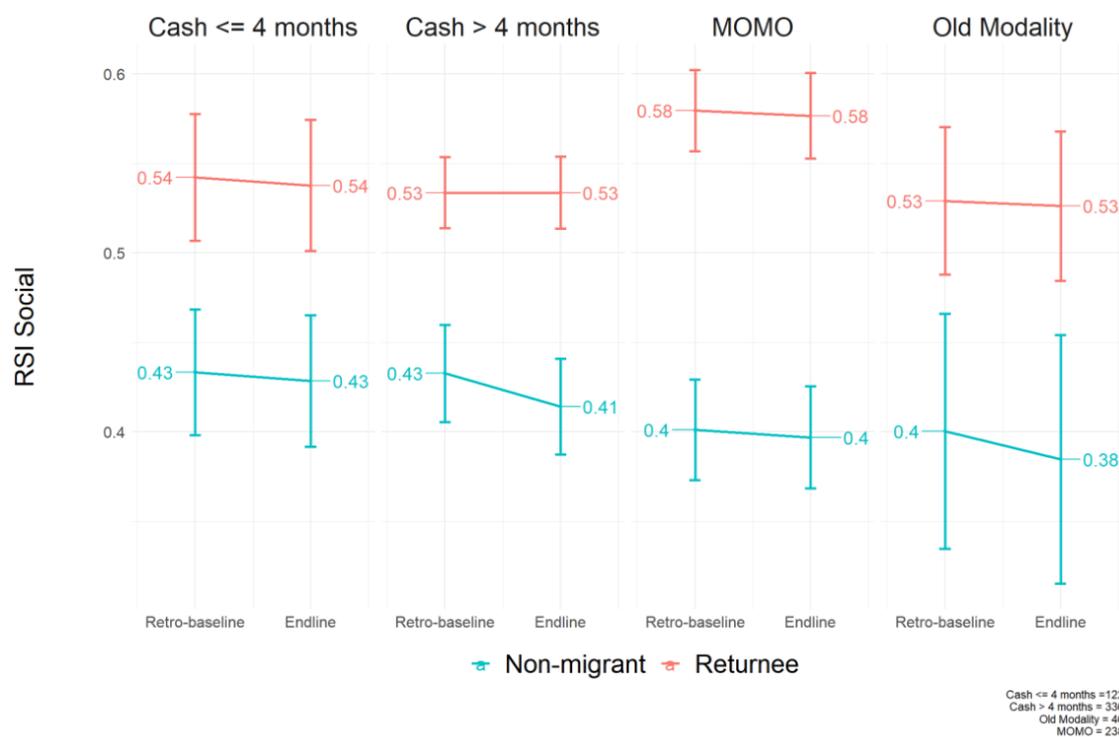
Figure 11 Social RSI at retro-baseline and endline for matched returnee-non-migrants
N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23

Table 14 Separate Social RSI DID analysis for the individual treatment modalities
N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23.
Reference levels = retro-baseline non-migrant Cash <=4mths, MoMo/in-kind modality, Cash <=4mths

Term (cash less than 4 months)	estimate	std error	statistic	p-value
Intercept	0.43	0.02	24.06	0.00
Endline	-0.00	0.03	-0.19	0.85
Returnee	0.11	0.03	4.28	0.00
DID – endline x returnee	0.00	0.04	0.01	0.99

Term (MoMo)	estimate	std error	statistic	p-value
Intercept	0.40	0.01	30.59	0.00
Endline	-0.00	0.02	-0.23	0.82
Returnee	0.18	0.02	9.63	0.00
DID – endline x returnee	0.00	0.03	0.05	0.96

Term (in-kind modality)	estimate	std error	statistic	p-value
Intercept	0.40	0.03	14.80	0.00
Endline	-0.02	0.04	-0.41	0.68
Returnee	0.13	0.04	3.36	0.00
DID – endline x returnee	0.01	0.05	0.24	0.81

Term (cash > 4 months)	estimate	std error	statistic	p-value
Intercept	0.43	0.01	35.92	0.00
Endline	-0.02	0.02	-1.08	0.28
Returnee	0.10	0.02	5.93	0.00
DID – endline x returnee	0.02	0.02	0.77	0.44

Table 15 Social RSI DID analysis for returnees alone and non-migrants by the three modalities
N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23.
Baseline Reference level = Retro-baseline Cash <=4mths returnee (upper) and Cash <=4mths non-migrant (lower)

Term (returnees)	estimate	std error	statistic	p-value
Intercept	0.54	0.02	32.48	0.00
Endline	-0.00	0.02	-0.19	0.85
Cash > 4 months	-0.01	0.02	-0.44	0.66
MoMo	0.04	0.02	1.83	0.07
In-kind modality	-0.01	0.03	-0.41	0.68
DID – Endline X Cash > 4 months	0.00	0.03	0.16	0.87
DID – Endline X MoMo	0.00	0.03	0.05	0.96
DID – Endline X in-kind modality	0.00	0.05	0.03	0.97

Term (non-migrants)	estimate	std error	statistic	p-value
Intercept	0.43	0.02	20.66	0.00
Endline	-0.00	0.03	-0.16	0.87
Cash > 4 months	-0.00	0.02	-0.03	0.98
MoMo	-0.03	0.03	-1.25	0.21
In-kind modality	-0.03	0.04	-0.82	0.41
DID – Endline X Cash > 4 months	-0.01	0.03	-0.39	0.69
DID – Endline X MoMo	0.00	0.04	0.02	0.99
DID – Endline X in-kind modality	-0.01	0.06	-0.19	0.85

4.5.3   RSI Psychosocial-matched returnee-non-migrants

Finally, analysis of the Psychosocial dimension of the RSI shows that the rank and trends in the matched returnee cohorts are patterns in rank and trends observed in the larger sample of returnees (Figure 12 and Figure 8). All returnee cohorts scored significantly higher than their corresponding non-migrants baseline with the exception of **in-kind modality,** where rank was reversed but values were not statistically significantly different. Also, none had a retro-baseline-endline gradient that was significantly different to **Cash <=4mths** for both returnees and non-migrants, mirroring the other dimensions in showing no improvements over time (Figure 12, Table 16 and Table 17).

Both the **MoMo** and **in-kind modality** returnee retro-baseline values are significantly lower than the reference **Cash <=4mths**, while **Cash >4mths** has a higher retro-baseline value than **Cash <=4mths**, but not significantly so. The **in-kind modality** non-migrant cohort (N=23) unusually returned a significantly greater retro-baseline and endline values compared to their corresponding returnees, but once again, showed no significant trend between retro-baseline and endline.
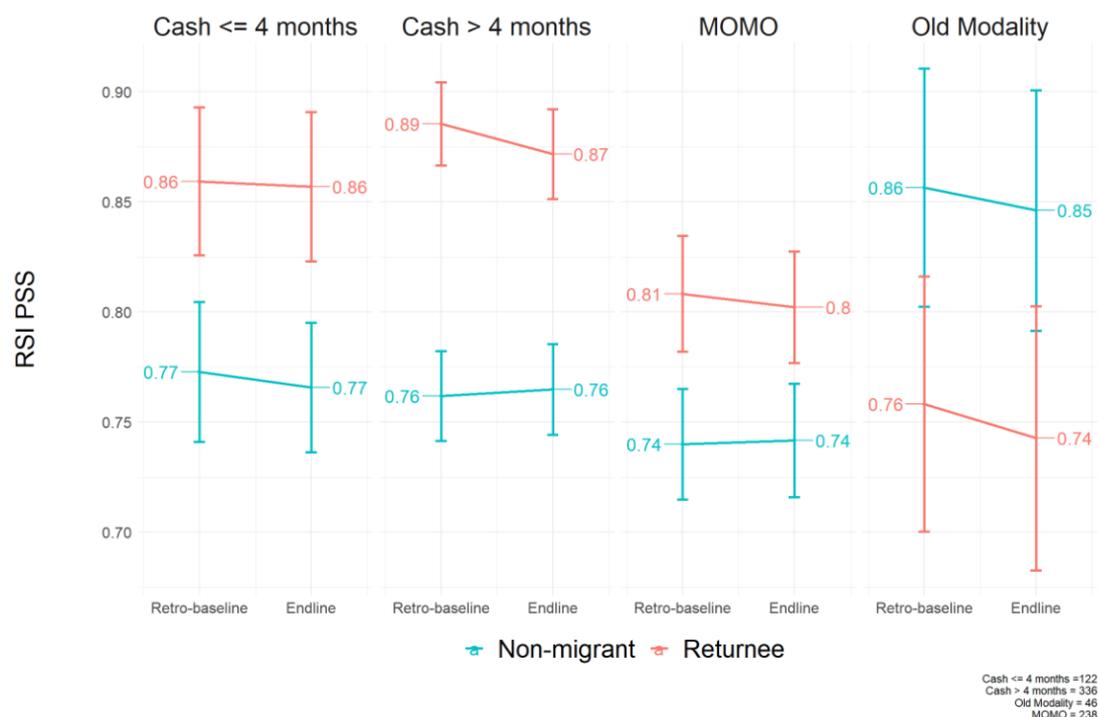
Figure 12 Psychosocial RSI at retro-baseline and endline for matched returnee-non-migrants
N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23

Table 16 Separate Psychosocial RSI DID analysis for the individual treatment modalities
N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23.
Reference levels = retro-baseline non-migrant Cash <=4mths, MoMo/in-kind modality, Cash <=4mths

Term (cash less than 4 months)	estimate	std error	statistic	p-value
Intercept	0.77	0.02	47.97	0.00
Endline	-0.01	0.02	-0.31	0.76
Returnee	0.09	0.02	3.80	0.00
DID – endline x returnee	0.00	0.03	0.14	0.89

Term (MoMo)	estimate	std error	statistic	p-value
Intercept	0.74	0.01	57.21	0.00
Endline	0.00	0.02	0.09	0.93
Returnee	0.07	0.02	3.73	0.00
DID – endline x returnee	-0.01	0.03	-0.30	0.77

Term (in-kind modality)	estimate	std error	statistic	p-value
Intercept	0.86	0.03	31.34	0.00
Endline	-0.01	0.04	-0.27	0.79
Returnee	-0.10	0.04	-2.54	0.01
DID – endline x returnee	-0.01	0.05	-0.09	0.93

Term (cash > 4 months)	estimate	std error	statistic	p-value
Intercept	0.76	0.01	74.84	0.00
Endline	0.00	0.01	0.21	0.84
Returnee	0.12	0.01	8.58	0.00
DID – endline x returnee	-0.02	0.02	-0.82	0.41

Table 17 Psychosocial RSI DID analysis for returnees alone and non-migrants by the three modalities
N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23.
Baseline reference level = retro-baseline Cash <=4mths returnee (upper) and Cash <=4mths non-migrant (lower)

Term (returnees)	estimate	std error	statistic	p-value
Intercept	0.86	0.02	49.90	0.00
Endline	-0.00	0.02	-0.10	0.92
Cash > 4 months	0.03	0.02	1.30	0.20
MoMo	-0.05	0.02	-2.41	0.02
In-kind modality	-0.10	0.03	-3.07	0.00
DID – Endline X Cash > 4 months	-0.01	0.03	-0.39	0.69
DID – Endline X MoMo	-0.00	0.03	-0.12	0.91
DID – Endline X in-kind modality	-0.01	0.05	-0.28	0.78

Term (non-migrants)	estimate	std error	statistic	p-value
Intercept	0.77	0.02	45.24	0.00
Endline	-0.01	0.02	-0.29	0.77
Cash > 4 months	-0.01	0.02	-0.55	0.59
MoMo	-0.03	0.02	-1.56	0.12
In-kind modality	0.08	0.03	2.57	0.01
DID – Endline X Cash > 4 months	0.01	0.03	0.36	0.72
DID – Endline X MoMo	0.01	0.03	0.29	0.77
DID – Endline X in-kind modality	-0.00	0.05	-0.07	0.94

Key takeaways for RSI dimension changes – returnees-non-migrant matched

1   None of the four Overall RSI retro-baseline and endline cohort values all have returnee values less than their corresponding non-migrant. Therefore**,** the notion of returnees achieving convergence with their non-migrants doesn't apply as this is only applicable when the returnees have a retro-baseline value below that of their non-migrant. This does not occur in the Sudanese data, with the one exception being Psychosocial in-kind modality cohort of 23 matched pairs where both retro-baseline and endline returnee values are less than the corresponding non-migrant values, but not statistically significantly so.

2   The qualitative work suggests that there may be **more nuances in the outcomes between returnees and non-migrants than indicated by the quantitative results and that returnees are not necessarily as better off than non-migrants as the quantitative findings indicate.** This is discussed further in section 4.10.

3   In discussion with the implementing partner in Sudan, Sayara, the following rationales were developed as potential explanations for these patterns:

   3.1 Most of the Sudanese returnees come from less well-off areas within Sudan, including those from Khartoum, which predominantly come from the most disadvantaged areas within the capital.

   3.2 Returnees are coming back into a very fragile political situation, with very high levels of inflation and, in some areas, significant insecurity and unrest. Having the support of IOM when re-entering Sudan could provide returnees with a sense they are somewhat insulated from the vagaries of their local social, political and economic conditions. This could account for the consistently better RSI values reported by returnees compared to unsupported non-migrants in the same community.

> 3.3 Non-migrants have witnessed a deterioration in the political/economic/security environment recently and therefore this may be reflected in the downward bias in the non-migrant scores compared to the returnees, as non-migrants become more despairing of the current and future situation they find themselves in. This hypothesis is explored further in section 4.10.

4.6 RSI MIMIC Overall

The RSI analysed above is the standard institutional IOM measure of reintegration, consisting of 31 indicators with expert weights. It is unlikely that the expert weighting system developed on data from 290 observations from four countries at an unknown time after return would be equally relevant across all countries and stages of reintegration within country. In the Annex[9] to Setting Standards for the Operationalisation of IOM's Integrated Approach To Reintegration[10] there is a detailed methodology for adjusting country-specific weights at both the Overall and dimension levels. A MIMIC analysis is therefore employed to provide an opportunity for the same indicators to create a single reintegration sustainability value, but without any assumptions on the weights; and to do this separately for retro-baseline and endline to allow for different weights for each of these points in the reintegration journey.

Essentially this is a method of allowing weights to be generated internally within the dataset, based upon the correlation structures within that same dataset. The advantage of utilising MIMICs is that they facilitate modelling multiple outcomes in a single model, which for all of the following models were: returnee's perception of able to stay in-country, perception of being part of their local community, and the perception of their re-/integration.

All of the indicators used in the model are from the institutional RSI with the exception of one reflective indicator, re-/integration perception. Keeping the indicator set as close to the original 31 RSI indicators as possible is important to be able to compare the MIMIC and the institutional IOM RSI results with as few biases as possible. Note that there is no bounded range of MIMIC coefficients, so these datasets have been standardised to a mean of zero and a variance of one. These increase the correspondence of RSI MIMIC scores across different observations but are still not completely numerically comparable. Only a combined retro-baseline endline MIMIC modelling would provide unambiguous comparisons between retro-baseline and endline overall MIMICs RSIs. This was not undertaken here as it would mask potentially different drivers of reintegration at baseline and endline. See the Methodological Annex for full MIMIC analysis details.

Finding 10: The MIMIC confirms the finding of the Overall institutional RSI that there are no significant trends between baseline and endline. However, there are differences between the two models in terms of rank order among returnee and non-migrant cohorts.

4.6.1 RSI Overall MIMIC results with matched returnees-non-migrants

Figure 13 presents the scaled MIMIC kernel density distributions for retro-baseline and endline disaggregated by returnee/non-migrant and procurement modality. Consistently the returnee distributions are to the right of the overall mean (0.77), whereas the returnee distributions are skewed to the left side of the mean. Both distributions show little movement between retro-baseline and endline (Figure 13).

The analysis for all matched returnees and non-migrants is presented in Figure 14. The results show that the MIMIC Overall RSI returnee modality cohorts rank at retro-baseline are not the same as in

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[9] Samuel Hall (2017). Annex – Reintegration monitoring toolkit, commissioned by the International Organization for Migration; pp. 41–49.

[10] Samuel Hall (2017). Setting Standards for the Operationalisation of IOM's Integrated Approach to Reintegration, commissioned by the International Organization for Migration.

the institutional Overall RSI (Figure 14 and Figure 15). The returnee Cash>4mths cohort performed better than the other cohorts at both baseline and endline in the MIMIC model, whereas this is not the case in the institutional RSI.

All returnee procurement modality cohorts at retro-baseline are higher than the corresponding matched non-migrant cohorts with the exception of in-kind modality (N = 46, Figure 14), with the **Cash <=4mths** being statistically significantly higher. This is similar to the institutional RSI, although in that case all returnee cohorts are statistically higher than their non-migrant counterparts also with the exception of in-kind modality (Figure 15). Similar to the RSI Overall, the MIMIC RSI Overall also indicates no meaningful trend over time.

Key finding for Overall RSI MIMIC changes – returnees-non-migrant matched
1. **Apart from a change in rank order of the performance across both returnee and non-migrant procurement modality cohorts, both indices indicate no significant retro-baseline-endline trend.**
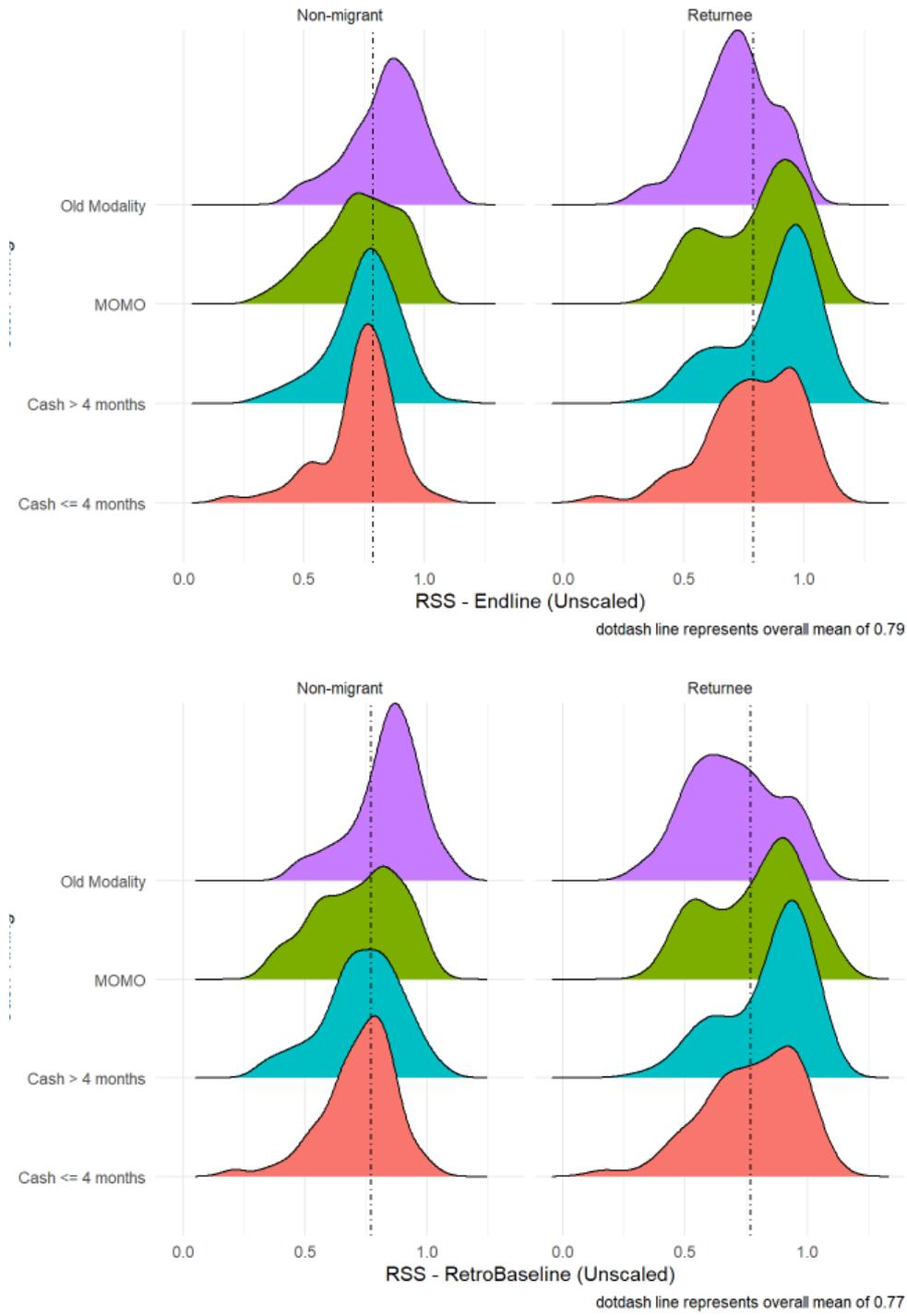
Figure 13 Kernel density diagrams for retro-baseline and endline RSI MIMIC
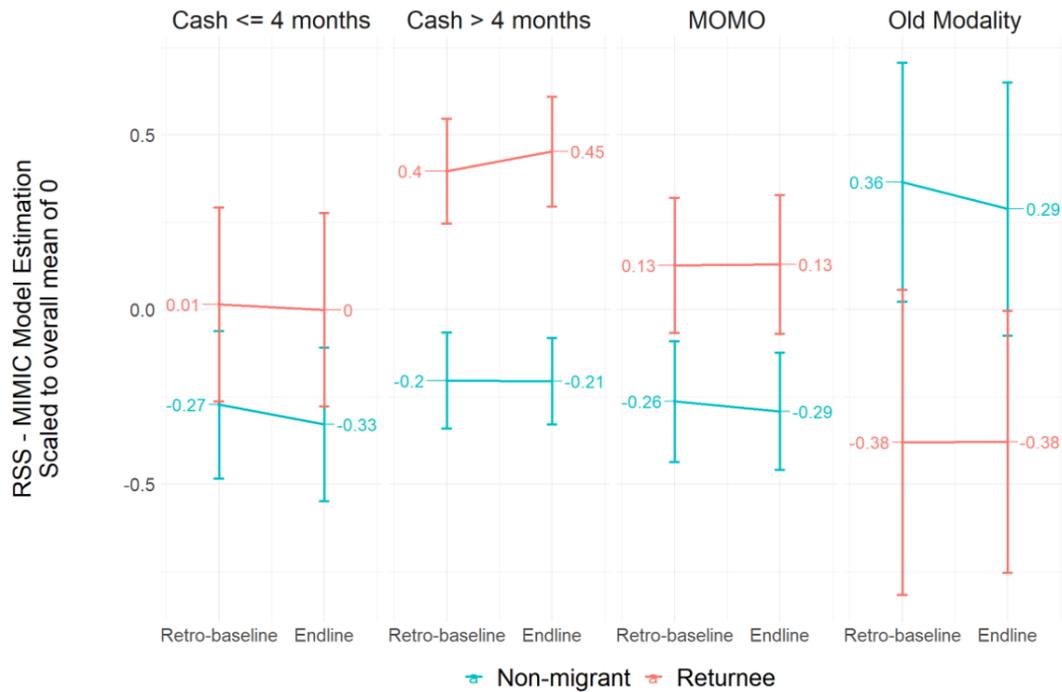
Figure 14 Overall RSI MIMIC at retro-baseline and endline for matched returnee-non-migrants
N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23
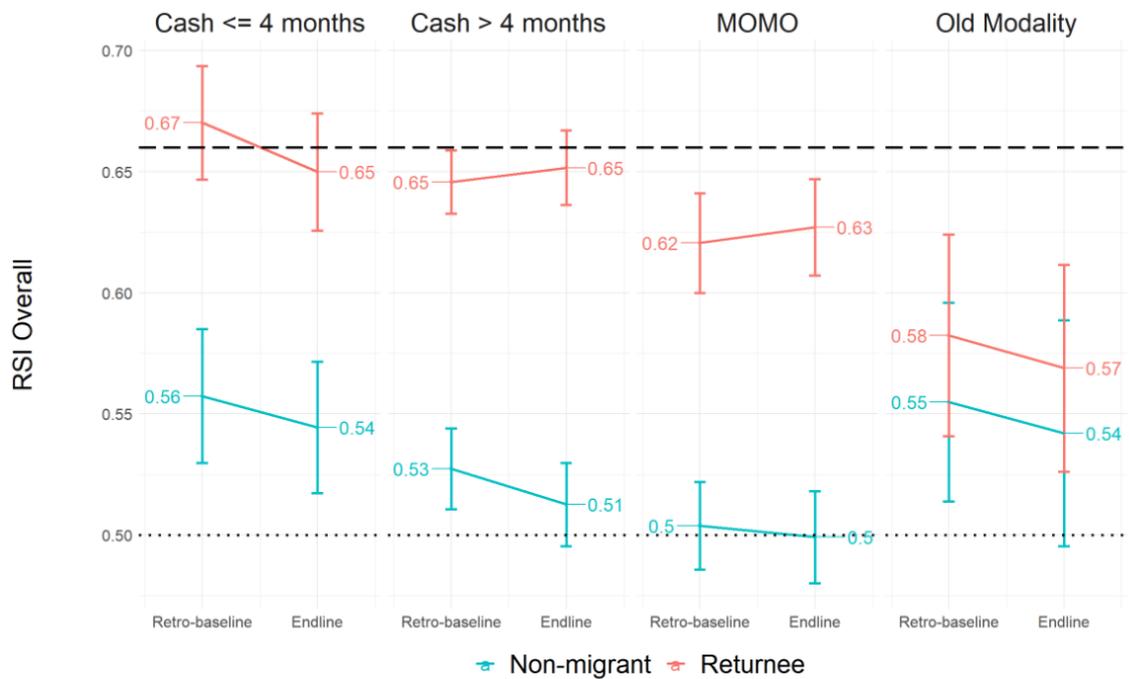
Figure 15 Figure 9 is repeated here for comparison with Overall RSI. RSI at retro- and endline for matched returnee-non-migrants
N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23

4.6.2 RSI Overall MIMIC coefficients with matched returnees-non-migrants

Finding 11: The expert weighting in the Overall institutional RSI is not well matched with the statistically significant positive indicator coefficients derived from the MIMIC models.

Finding 12: There are differences in the significant indicators at retro-baseline and endline, implying that the single set of weights may not be relevant over time. Only three indicators (all Psychosocial) are positively significant at both retro-baseline and endline, underlining the challenge of a one size fits all weighting system.

Table 18 presents both the retro-baseline and endline RSI MIMIC coefficients, and for comparison, includes Overall RSI expert weights. This provides an indication of how well matched the weighting in the Overall institutional RSI is with the MIMIC indicator coefficients.

PSS_30 Feel able to stay is the most heavily weighted institutional RSI with a value of 0.1, against a mean of all RSI weights of 0.035. This is the MIMIC model's base value, so it does not generate a probability, but it has the third largest positive coefficient (0.24).

The other two reflective indicators, **PPS_24 Feel part of the community** and **PPS_30 Perception of integration,** have larger positive coefficients and highly significant (0.77 and 0.32) baseline; and (0.71 and 0.40) endline respectively. This suggests that the choice of these three reflective indicators show a positive correlation structure, confirmed by simple correlation, a desirable attribute of a MIMIC model, but not so strongly correlated that they would no longer represent a different aspect of reintegration.

When comparing Overall MIMIC indicators that are positively statistically significant with p-values <=0.05, these RSI indicators often, but not always, correspond with an above average (>0.035) RSI Overall weight. At retro-baseline, two out of three positively significant MIMIC coefficients also had above average institutional RSI Overall weights (mean weight = 0.035). While at endline, three out of four positively significant MIMIC coefficients also had above average institutional RSI Overall weights.

Unsurprisingly, there are differences in the significant indicators at retro-baseline and endline. As this Sudan MIMIC analysis indicates (Table 18), there are different statistically significant drivers of reintegration in Sudan at retro-baseline and endline. However, there are three non-reflective indicators that are positively significant in both retro-baseline and endline, all located within the Psychosocial dimension, and these are:

    a. PSS_22 Participation in social activities (RSI Ws=0.04)
    b. PSS_23 Strength of support network (RSI Wt=0.03, <μ Wts=0.035)
    c. PSS_28 Experiencing signs of distress–IMV (RSI Ws=0.04, >μ Wts=0.035)

Similarly, there are institutional RSI indicators that have above average weights that were not positively significant at either retro-baseline, endline or both (Table 18):

    d. Econ_2 Frequency of food insecurity–INV
    e. Econ_3 Financial inclusion
    f. Econ_5 Debt to spending ratio
    g. SOC_15 Access to justice and law enforcement in community
    h. SOC_16 Position of ID
    i. SOC_19 Access to healthcare
    j. PSS_25 Sense of physical security
    k. PSS_28 Frequency of experiencing signs of distress–INV.

Table 18 RSI Overall MIMIC model coefficients for retro-baseline and endline. Institutional RSI Overall weights added for comparison

N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23

Variable		Retrobaseline			Endline		
RSI MIMIC		Std. all.	P>t	RSI Wts	Std. all.	P>t	RSI Wts
Reflective							
PSS_30	Feel able to stay	0.24	NA	0.1	0.23	NA	0.1
PSS_24	Feel part of the community	0.77	0.00	**0.04**	0.71	0.00	**0.04**
PSS_30a	Perception of integration	0.32	0.00	NA	0.40	0.00	NA
Pillar: Economic							
Econ_1	Satisfaction with current economic situation	-0.10	0.04	0.05	-0.01	0.79	0.05
Econ_2	Frequency of food insecurity -INV	-0.01	0.83	0.08	-0.02	0.67	0.08
Econ_3	Financial inclusion	0.03	0.52	0.02	-0.01	0.92	0.02
Econ_4	Frequency of borrowing money - INV	-0.08	0.17	0.02	-0.19	0.00	0.02
Econ_5	Debt to spending ratio	0.05	0.21	0.04	0.04	0.32	0.04
Econ_6	Perceived access to employment and training	-0.10	0.05	0.03	-0.22	0.00	0.03
Econ_7	Currently working	0.06	0.18	0.03	0.00	0.92	0.03
Econ_8	Ownership of productive assets	-0.01	0.74	0.03	0.15	0.00	**0.03**
Econ_9	Currently searching for a job - INV	0.08	0.10	0.03	0.03	0.48	0.03
Pillar: Social							
Soc_11	Access to Housing in community	0.02	0.70	0.03	-0.05	0.34	0.03
Soc_12	Perceived standard of housing	-0.09	0.09	0.03	0.03	0.55	0.03
Soc_13	Access to education in community	0.08	0.13	0.03	0.03	0.52	0.03
Soc_14	Children enrolled in school	0.08	0.06	0.02	0.07	0.10	0.02
Soc_15	Access to justice and law enforcement in community	0.03	0.59	0.04	0.09	0.11	0.04
Soc_16	Possession of ID	0.04	0.28	0.05	0.06	0.14	0.05
Soc_17	Access to documentation in community	-0.02	0.74	0.00	0.03	0.60	0.00
Soc_18	Access to safe drinking water in the community	-0.14	0.01	0.00	-0.12	0.02	0.00
Soc_19	Access to healthcare	-0.07	0.27	0.07	-0.09	0.17	0.07
Soc_20	Quality/Adequacy of health care in community	0.11	0.08	0.03	0.09	0.15	0.03
Pillar: Psychosocial							
PSS_22	Participation in social activities	0.41	0.00	**0.04**	0.36	0.00	**0.04**
PSS_23	Strength of support network	0.27	0.00	**0.03**	0.30	0.00	**0.03**
PSS_25	Sense of physical security	0.04	0.35	0.05	0.06	0.19	0.05
PSS_26	Frequency of conflict with family /domestic tension-INV	0.01	0.91	0.01	0.00	0.92	0.01
PSS_27	Feeling of discrimination in Country of origin-INV	0.03	0.50	0.00	0.03	0.53	0.00
PSS_28	Frequency of experiencing signs of distress-INV	0.22	0.00	**0.04**	0.23	0.00	**0.04**
PSS_29	Desire to receive psychological support	0.06	0.15	0.03	0.11	0.02	0.03

Legend P value Significance level
Sig. coefficient (p<=0.01)
Sig. coefficient (p>0.01 & <0.05)
Sig. coefficient (p>0.05 & <0.10)

4.7   RSI MIMIC dimensions

Finding 13: Most MIMIC RSIs also see returnees outperforming non-migrants, except for Economic MIMIC RSI Cash <=4mths and in-kind modality. There were multiple differences in rank between the four modalities when comparing MIMIC and RSI dimension scores.

Finding 14: The alignment of the MIMIC coefficients and the RSI weights was unsurprisingly imperfect, with significantly positive retro-baseline and endline MIMIC variables not always reflected in higher RSI weights.

4.7.1   RSI Economic MIMICs
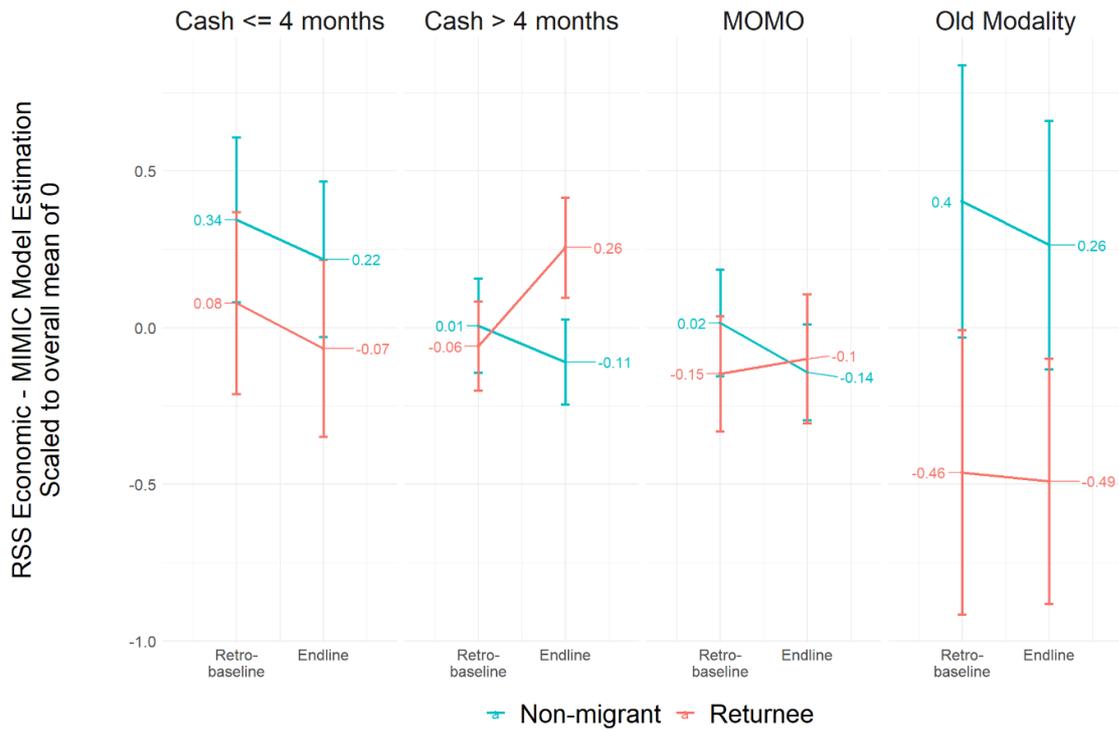
Figure 16 Economic RSI MIMIC at retro-baseline and endline for matched returnee-non-migrants scale to a mean=0 and variance=1

N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23
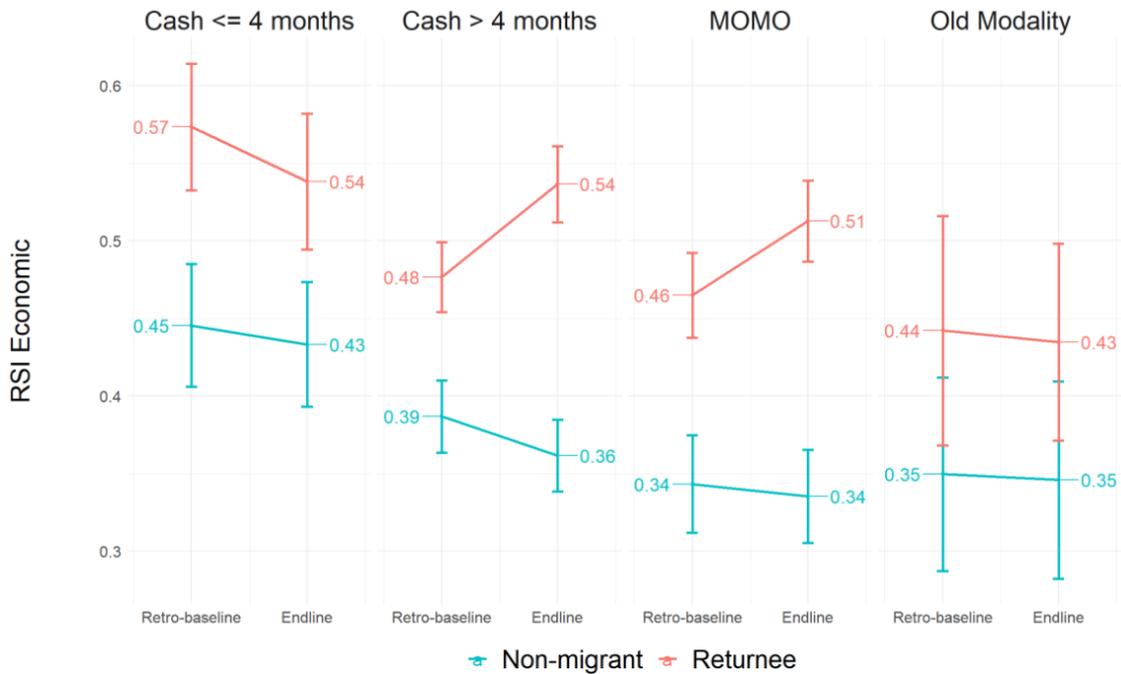
Figure 17 Figure 10 repeated here for comparison with Overall MIMIC RSI Economic RSI MIMIC at retro-baseline and endline for matched returnee–non-migrants

N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23

RSI Economic MIMIC retro-baseline-endline results with matched returnees-non-migrants

The Economic MIMIC RSI for all matched returnees and non-migrants is presented in Figure 16. Comparison with the institutional Economic RSI (Figure 17) shows that the clear divergence between

returnees and non-migrants in the institutional RSI becomes a lot more complicated in the MIMIC model. The returnee modality cohorts rank at both retro-baseline and endline are not the same as the institutional economic, but at endline the big difference is the substantial gain made in the Economic MIMIC RSI for Cash >4mths.

Graphically the non-migrant trend over time is negative for two cohorts and positive for the other two, but none of these are statistically significant. Two of the returnee modalities have a negative trend (Cash <=4mths and MoMo/in-kind modality), with Cash >4mths as a significantly positive trend (Figure 16).

RSI Economic MIMIC retro-baseline-endline coefficients with matched returnees-non-migrants

Table 19 presents both the retro-baseline and endline Economic dimension RSI MIMIC coefficients, and for comparison, includes Economic dimension RSI expert weights. The RSI Economic dimension weights are in bold red text if their value is less than the mean of all the weights in the Economic dimension = 0.111.

The analysis shows that the expert weighting in the Economic institutional RSI is not well matched with the statistically significant positive indicator coefficients from the MIMIC models. At baseline there are no positively significant MIMIC economic drivers. At endline, only one of three positively significant MIMIC economic drivers attracted an Economic RSI weight >0.111.

Additionally, the only positively significant endline Economic RSI MIMIC indicator that was also positively significant for the Overall MIMIC model was Econ_8 Ownership of productive assets. Conversely, Econ_6 Perceived access to training was negatively significant in both the Economics and Overall MIMIC models.

In both the Overall and the Economic MIMIC, the Economic indicator 'satisfaction' with current economic situation was negative at baseline (Overall p-value=0.04; Economic p-value = 0.14). And yet one might expect that indicator to be aligned with Frequency of food insecurity and other economic indicators. One hypothesis that could explain it is that this is the first question of the RSS+ survey, and a fairly significant one that might attract desirability bias in the form of underreporting their satisfaction with their current economic situation, in the hope of attracting more assistance.

Table 19 RSI Economic MIMIC model coefficients for retro-baseline and endline. Institutional RSI Economic dimension weights added for comparison
N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23

Variable		Retrobaseline			Endline		
Economic RSI MIMIC		Std. all.	P>t	RSI Wts	Std. all.	P>t	RSI Wts
Reflective							
PSS_30	Feel able to stay	0.24	NA	0.15	0.30	NA	0.15
PSS_24	Feel part of the community	0.81	0.00	**0.15**	0.46	0.00	**0.15**
PSS_30a	Perception of integration	0.29	0.00	NA	0.56	0.00	NA
Pillar: Economic							
Econ_1	Satisfaction with current economic situation	-0.08	0.14	0.15	0.02	0.78	0.15
Econ_2	Frequency of food insecurity -INV	0.14	0.04	**0.12**	0.15	0.02	**0.12**
Econ_3	Financial inclusion	0.11	0.08	0.08	0.06	0.31	0.08
Econ_4	Frequency of borrowing money - INV	-0.03	0.62	0.1	-0.08	0.28	0.1
Econ_5	Debt to spending ratio	0.07	0.14	0.08	0.16	0.01	**0.08**
Econ_6	Perceived access to employment and training	-0.14	0.03	0.13	-0.32	0.00	0.13
Econ_7	Currently working	0.13	0.03	**0.1**	-0.04	0.49	0.1
Econ_8	Ownership of productive assets	0.02	0.65	0.11	0.41	0.00	**0.11**
Econ_9	Currently searching for a job - INV	0.15	0.03	**0.13**	-0.01	0.88	0.13

Legend P value Significance level
Sig. coefficient (p<=0.01)
Sig. coefficient (p>0.01 & <0.05)
Sig. coefficient (p>0.05 & <0.10)

4.7.2   RSI Social MIMICs
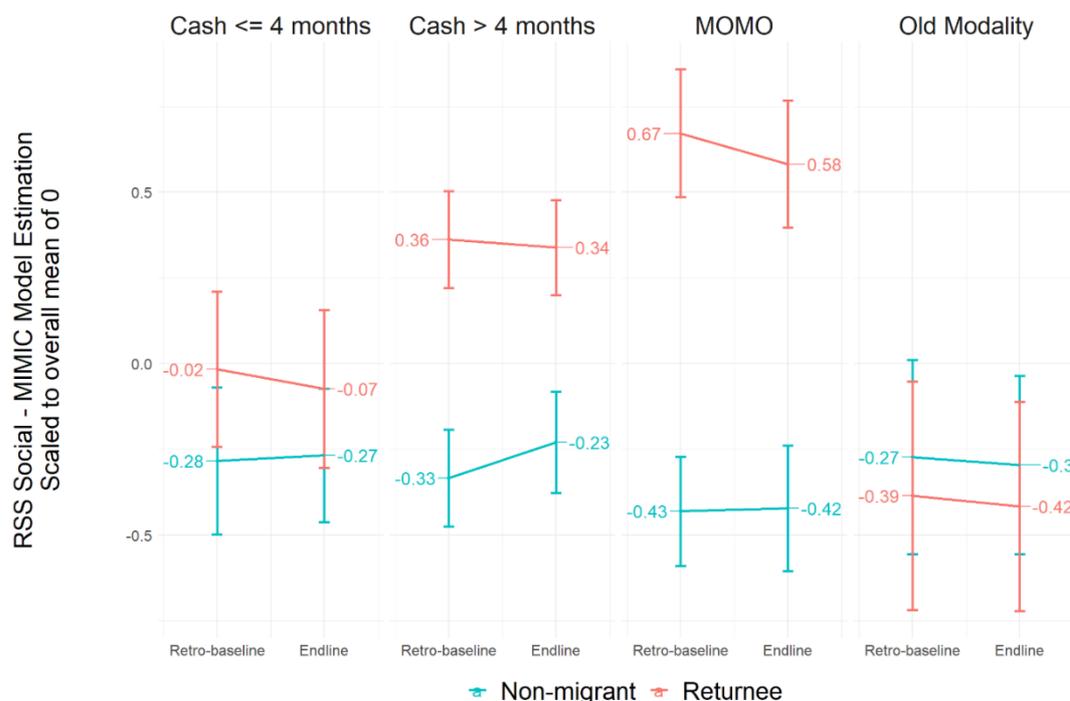
Figure 18 Social RSI MIMIC at retro-baseline and endline for matched returnee-non-migrants
N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23
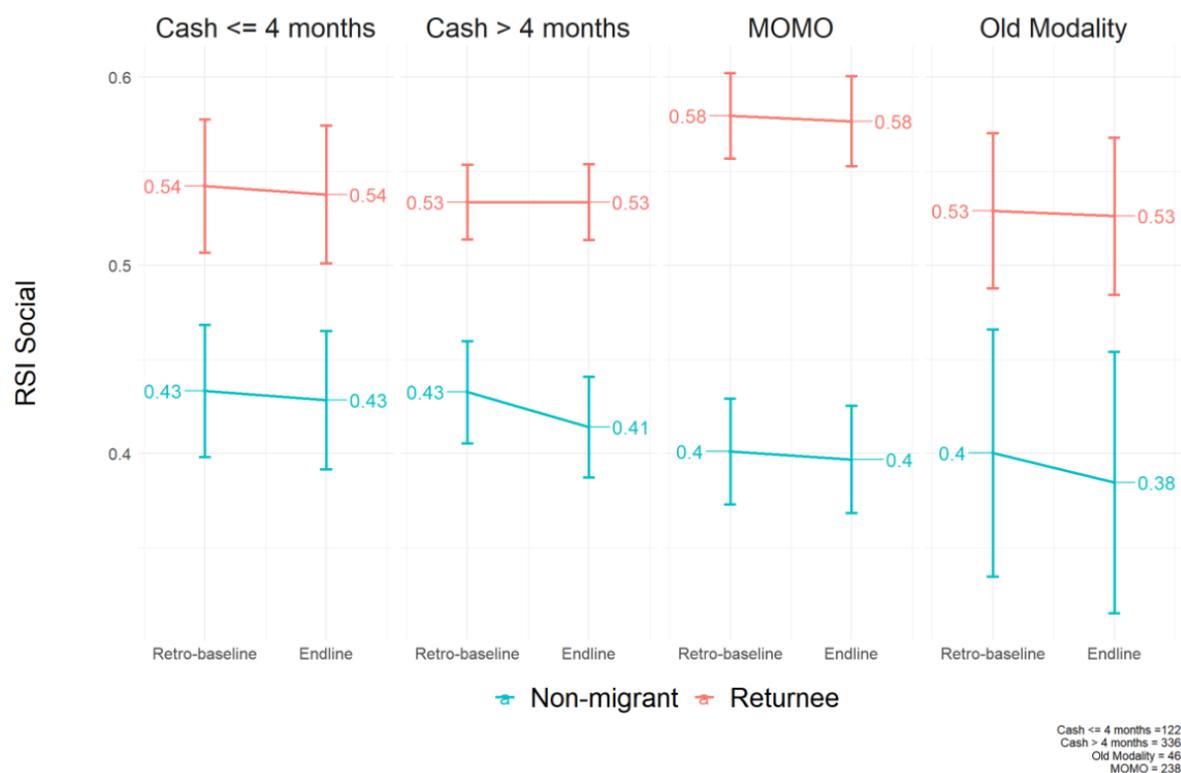
Figure 19 Figure 11 repeated here for comparison with Overall MIMIC RSI Social RSI MIMIC at retro-baseline and endline for matched returnee-non-migrants
N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23

RSI Social MIMIC retro-baseline-endline results with matched returnees-non-migrants

The Social MIMIC RSI for all matched returnees and non-migrants is presented in Figure 18, with the institutional RSI comparison in Figure 19. The Social MIMIC RSI returnee modality cohorts rank at endline are not the same as the institutional Social RSI. The highest scoring cohort in the social MIMIC is the b, followed by **Cash >4mths**, **Cash <=4mths** and finally **in-kind modality** whereas in the institutional Social RSI there is agreement with MoMo performing best, but the three other cohorts are essentially equal and flat.

Only two returnee cohorts at retro-baseline score significantly are higher than their corresponding matched non-migrant calibration cohorts (**MoMo** and **Cash >4mths**), as in the institutional RSI. Similarly, like the institutional Social RSI trends, all Social MIMIC RSI trends are flat.

RSI Social MIMIC retro-baseline-endline coefficients with matched returnees-non-migrants

Table 20 presents both the retro-baseline and endline Social dimension RSI MIMIC coefficients, and for comparison, includes Social dimension RSI expert weights. The RSI Social dimension weights are in bold red text if their value is less than the mean of all the weights in the Social dimension = 0.09.

In the Social dimension within the Overall MIMIC RSI, there are two significant and positive indicators at both retro-baseline and endline, **PSS_30a Perception of integration and Soc_15 Access to justice and law enforcement** which receives an above average weight in the RSI (0.12). **Soc_18 Access to safe drinking water in the community** was negatively significant for both Overall and Social dimension as well as both retro-baseline and endline.

Table 20 RSI Social MIMIC model coefficients for retro-baseline and endline. Institutional RSI Social dimension weights added for comparison

N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23

Variable		Retrobaseline			Endline		
Social RSI MIMIC		Std. all.	P>t	RSI Wts	Std. all.	P>t	RSI Wts
Reflective							
PSS_30	Feel able to stay	0.30	NA	0.15	0.32	NA	0.15
PSS_24	Feel part of the community	0.45	0.00	**0.15**	0.62	0.00	**0.15**
PSS_30a	Perception of integration	0.54	0.00	NA	0.42	0.00	NA
Pillar: Social							
Soc_11	Access to Housing in community	-0.03	0.63	0.10	-0.09	0.17	0.10
Soc_12	Perceived standard of housing	-0.22	0.01	0.12	-0.01	0.91	0.12
Soc_13	Access to education in community	0.05	0.52	0.11	0.01	0.93	0.11
Soc_14	Children enrolled in school	0.05	0.39	0.07	0.05	0.36	0.07
Soc_15	Access to justice and law enforcement in comm	0.28	0.00	**0.12**	0.24	0.00	**0.12**
Soc_16	Possession of ID	0.04	0.50	0.05	0.04	0.42	0.05
Soc_17	Access to documentation in community	0.09	0.21	0.00	0.12	0.09	0.00
Soc_18	Access to safe drinking water in the community	-0.27	0.00	0.00	-0.17	0.01	0.00
Soc_19	Access to healthcare	0.01	0.93	0.20	-0.10	0.21	0.20
Soc_20	Quality/Adequacy of health care in community	0.07	0.38	0.15	0.06	0.44	0.15

Legend P value Significance level
Sig. coefficient (p<=0.01)
Sig. coefficient (p>0.01 & <0.05)
Sig. coefficient (p>0.05 & <0.10)

4.7.3 RSI Psychosocial MIMICs
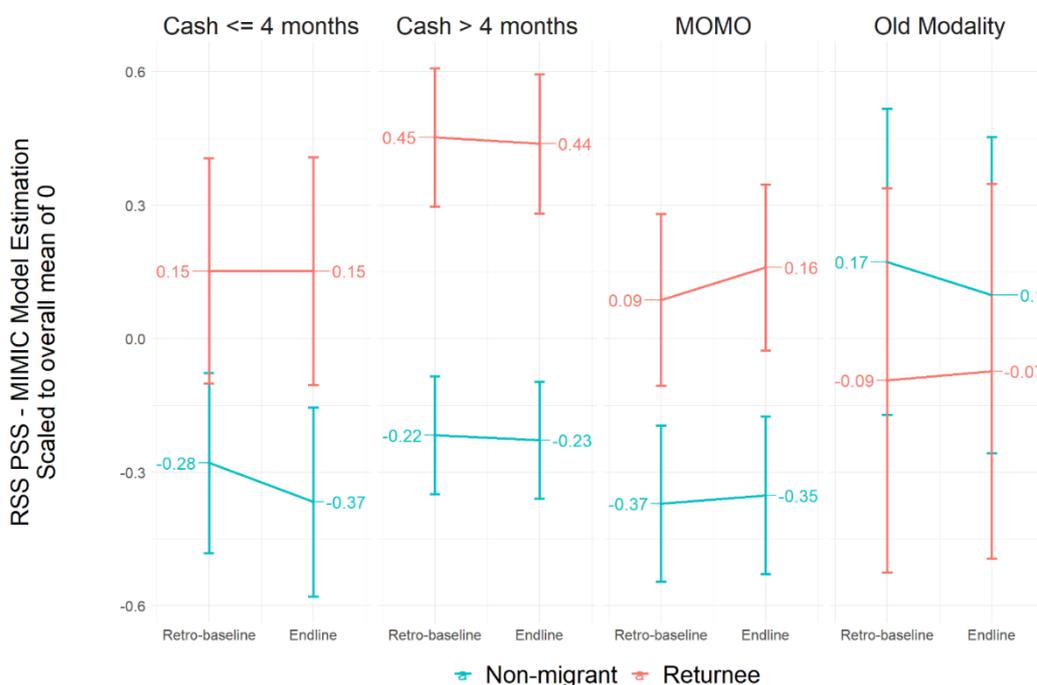
Figure 20 Psychosocial RSI MIMIC at retro-baseline and endline for matched returnee-non-migrants

N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23)
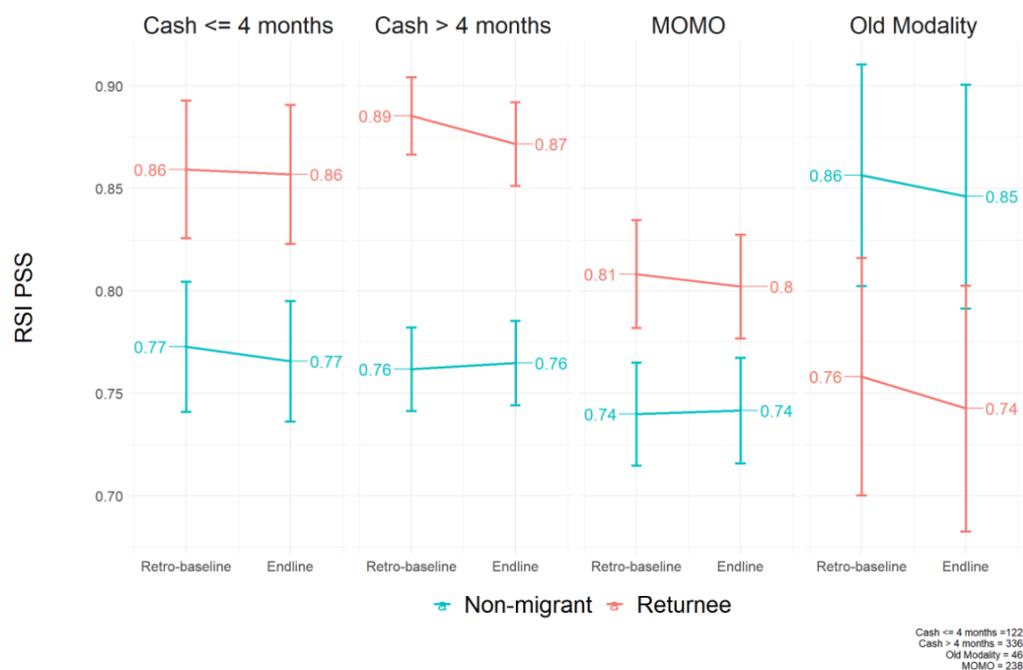
Figure 21 Figure 12 repeated here for comparison with Overall MIMIC RSI Psychosocial RSI MIMIC at retro-baseline and endline for matched returnee-non-migrants
N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23

RSI Psychosocial MIMIC retro-baseline-endline results with matched returnees-non-migrants

The Psychosocial MIMIC RSI for all matched returnees and non-migrants is presented in Figure 20, with the corresponding RSI in Figure 21. The graphs show that the Psychosocial MIMIC RSI returnee modality cohorts rank at endline-retro-baseline are the same as the institutional Psychosocial RSI (Figure 20 and Figure 21), with Cash >4mths performing best, followed by Cash <=4mths, and finally >MoMo/in-kind modality.

All returnee cohorts at retro-baseline have statistically significantly higher Social MIMIC RSI scores than their respective matched non-migrants. Additionally, none of the MIMIC trendlines show any significant difference between the retro-baseline and endline values.

RSI Psychosocial MIMIC retro-baseline-endline coefficients with matched returnees-non-migrants

Table 21 presents both the retro-baseline and endline Psychosocial dimension RSI MIMIC coefficients, and for comparison, includes the Psychosocial dimension RSI expert weights (Figure 20 and Figure 21). The RSI Psychosocial dimension weights are in bold red text if their value is less than the mean of all the weights in the Psychosocial dimension = 0.111.

It shows that **the expert weighting in the Psychosocial institutional RSI are not well matched with the statistically significant positive indicator coefficients from the MIMIC models**. A retro-baseline only 1/3 positively significant MIMIC Psychosocial drivers attracted a Psychosocial RSI weight >0.09. At endline this figure was 1/4.

Three non-reflective indicators had significantly positive coefficients in both retro-baseline and endline are:

- Participation in social activities (RSI Wt=0.12, >μ Wts=0.111)

- Strength of support network (RSI Wt=0.05, <μ Wts=0.111)

- Frequency of experiencing signs of distress–INV (RSI Wt=0.102, <μ Wts=0.111)

And these three indicators were also significantly positive indicators across retro-baseline and endline Psychosocial RSI MIMIC indicators and the Overall MIMIC model:

a. Participation in social activities
b. Strength of support network
c. Frequency of experiencing signs of distress–INV

Table 21 RSI Psychosocial MIMIC model coefficients for retro-baseline and endline. Institutional RSI Psychosocial dimension weights added for comparison
N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23

Variable		Retrobaseline			Endline		
Economic RSI MIMIC		Std. all.	P>t	RSI Wts	Std. all.	P>t	RSI Wts
Reflective							
PSS_30	Feel able to stay	0.24	NA	0.15	0.25	NA	0.15
PSS_24	Feel part of the community	0.79	0.00	0.15	0.82	0.00	0.15
PSS_30a	Perception of integration	0.30	0.00	NA	0.32	0.00	NA
Pillar: Psychosocial							
PSS_22	Participation in social activities	0.45	0.00	0.12	0.42	0.00	0.12
PSS_23	Strength of support network	0.24	0.00	0.05	0.18	0.00	0.05
PSS_25	Sense of physical security	0.02	0.68	0.1	0.08	0.08	0.1
PSS_26	Frequency of conflict with family /domestic tension-INV	0.02	0.70	0.12	0.00	0.97	0.12
PSS_27	Feeling of discrimination in Country of origin-INV	0.01	0.80	0.11	0.02	0.57	0.11
PSS_28	Frequency of experiencing signs of distress-INV	0.22	0.00	0.10	0.21	0.00	0.10
PSS_29	Desire to receive psychological support	0.05	0.25	0.1	0.12	0.01	0.10

Legend P value Significance level
Sig. coefficient (p<=0.01)
Sig. coefficient (p>0.01 & <0.05)
Sig. coefficient (p>0.05 & <0.10)

4.8 Non-migrant identity

Finding 15: There is no increase in returnees propensity to have a non-migrant identity, and numerically the propensity values diverged slightly.

Analysing non-migrant identity propensity through use of logistic regression to predict non-migrant membership is a technique to evaluate how similar returnees and non-migrant are across the institutional RSI indicators (see Methodological Annex for full details).

Figure 22 has a horizontal convergence line with Y value 0.5. This represents the proportion of the sample that is made up of non-migrants. If returnees were identical to non-migrants across all of these indicators, then the returnee and non-migrant probability would be 0.5. The closer the probabilities of the non-migrant and returnee are, the more similar these two groups are. Trends over time are presented here, from the retro-baseline to the endline.
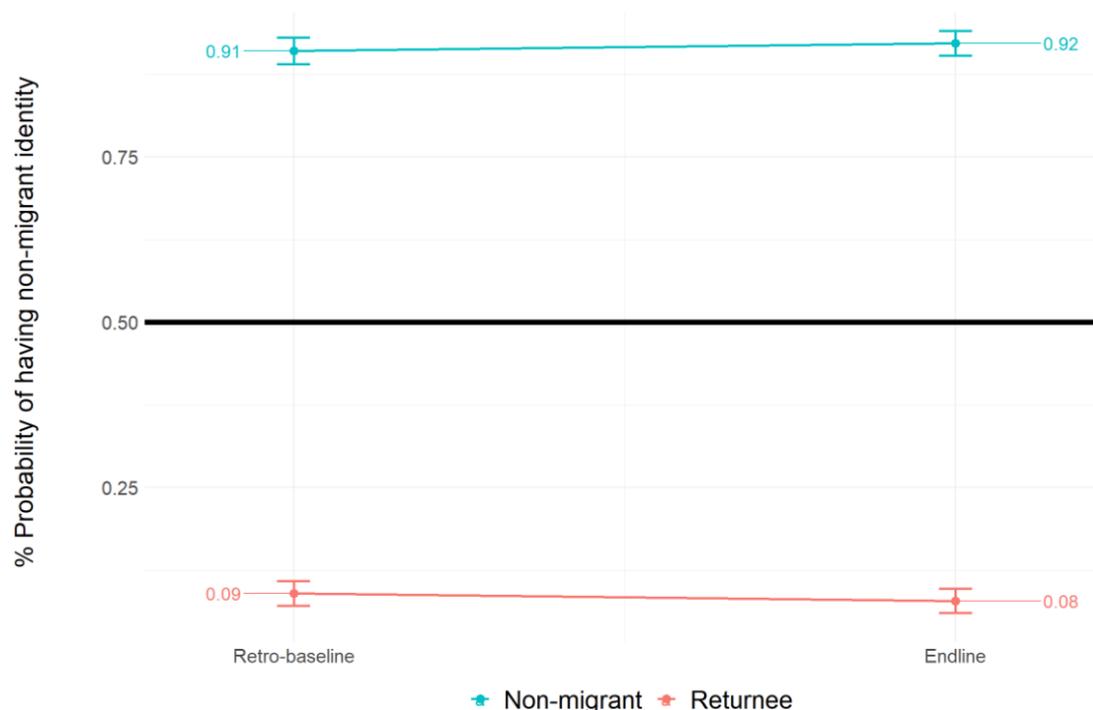
Figure 22 Predicted probability of non-migrant identity for matched returnees-non-migrants

The analysis of non-migrant propensity scores shows that the non-migrant and returnee identities, as defined by the institutional RSI indicators, are very different. Nor is there any indication that these two groups become any more similar by endline. There are also no significant differences between the treatment modalities within returnees or within non-migrants, hence single lines are plotted to represent returnees and non-migrants in Figure 22.

Table 22 presents the odds ratios for the non-migrant propensity logistic regression. Values greater than one indicate a positive association with greater propensity to be like a non-migrant, and values less than one represent a greater propensity to be more like a returnee (see Methodological Annex for more details on this analytical approach to evaluating reintegration with non-migrant calibration group).

Table 22 includes two columns of the standard RSI Overall weights to provide a basis for comparing statistically significant (p-value<=0.05) odds ratios >1 with the RSI Overall weights. RSI weights labelled green if greater than the mean of all weights of 0.035 with the corresponding odds ratios >1 and statistically significant (p-value<=0.05). Otherwise, the corresponding expert weight is marked red.

4.8.1 Summary of non-migrant propensity scores odds ratios

At retro-baseline, 1 out of 3 >1 significant odds ratios also attracted Overall RSI weights greater than the mean. At endline this improved to 3 of 4 >1 significant odds ratios also attracting Overall RSI weights greater than the mean.

Table 22 Non-migrant identity propensity scores for retro-baseline and endline. Institutional RSI Overall weights added for comparison

N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23

Non-migrant Propensity Logistic regression		Retro-Baseline			Endline		
		Odds Ratio	P-value	RSI Wts	Odds Ratio	P-value	RSI Wts
Pillar: Economic							
Econ_1	Satisfaction with current economic situation	1.34	0.16	0.05	2.35	0.00	0.05
Econ_2	Frequency of food insecurity -INV	0.42	0.00	0.08	0.48	0.00	0.08
Econ_3	Financial inclusion	0.24	0.00	0.02	0.27	0.00	0.02
Econ_4	Frequency of borrowing money - INV	0.29	0.00	0.02	0.30	0.00	0.02
Econ_5	Debt to spending ratio	2.02	0.01	0.04	1.31	0.34	0.04
Econ_6	Perceived access to employment and training	0.62	0.06	0.03	0.49	0.01	0.03
Econ_7	Currently working	1.26	0.29	0.03	0.87	0.56	0.03
Econ_8	Ownership of productive assets	1.51	0.10	0.03	0.82	0.41	0.03
Econ_9	Currently searching for a job - INV	1.06	0.78	0.03	0.99	0.98	0.03
Pillar: Social							
Soc_11	Access to Housing in community	0.57	0.05	0.03	0.48	0.02	0.03
Soc_12	Perceived standard of housing	1.57	0.11	0.03	2.29	0.01	0.03
Soc_13	Access to education in community	1.09	0.72	0.03	0.85	0.51	0.03
Soc_14	Children enrolled in school	0.72	0.26	0.02	1.01	0.98	0.02
Soc_15	Access to justice and law enforcement in community	0.57	0.02	0.04	0.51	0.01	0.04
Soc_16	Possession of ID	0.28	0.01	0.05	0.54	0.32	0.05
Soc_17	Access to documentation in community	0.86	0.48	0	0.90	0.65	0
Soc_18	Access to safe drinking water in the community	12.75	0.00	0	4.51	0.08	0
Soc_19	Access to healthcare	0.37	0.00	0.07	0.61	0.11	0.07
Soc_20	Quality/Adequacy of health care in community	1.38	0.18	0.03	1.03	0.90	0.03
Pillar: Psychosocial							
PSS_22	Participation in social activities	2.75	0.00	0.04	3.63	0.00	0.04
PSS_23	Strength of support network	0.04	0.00	0.03	0.03	0.00	0.03
PSS_24	Sense of belonging to community	3.34	0.00	0.04	3.47	0.00	0.04
PSS_25	Sense of physical security	0.45	0.00	0.05	0.43	0.00	0.05
PSS_26	Frequency of conflict with family /domestic tension-INV	0.71	0.08	0.01	0.59	0.02	0.01
PSS_27	Feeling of discrimination in Country of origin-INV	0.69	0.09	-	0.88	0.57	-
PSS_28	Frequency of experiencing signs of distress-INV	0.83	0.29	0.04	0.61	0.02	0.04
PSS_29	Desire to receive psychological support	1.75	0.05	0.03	1.72	0.06	0.03
PSS_30	Subjective ability to stay in Country of Origin	1.01	0.96	0.10	1.55	0.36	0.10
Sample: 280 returnees: 280 non-migrants		Pseudo R²	88%		Pseudo R²	74%	

Legend P value Significance level
Sig. coefficient (p<=0.01)
Sig. coefficient (p>0.01 & <0.05)
Sig. coefficient (p>0.05 & <0.10)

4.9 Integration perceptions

Finding 16: On average, returnee perceptions of reintegration do not improve over time. Only Cash <=4mths returnee cohort shows a statistically significant positive difference-in-difference (DID) compared to the non-migrants.

The fourth and final method of estimating latent reintegration was simply to ask returnees and non-migrants alike the following question for both contemporaneous endline and retro-baseline:

"If you consider re/integration to include your economic, social and psychosocial/mental well-being, how well do you currently feel you are reintegrated into this community?"

With the following response options ordered on a Likert scale:

Not at all integrated	0
Somewhat integrated	1
Okay level of integration	2
Very good level of integration	3
Feel fully integrated	4

Figure 23 presents the observed integration perception averages for matched returnees and non-migrants, disaggregated by the three treatment cohorts. Apart from Cash <=4mths, (a cohort that significantly increases reintegration perception score from 1.75 at retro-baseline to 2.15 at endline) we see very little change among returnees or non-migrants from baseline to endline, with returnees recording significantly higher retro-baseline values in Cash >4mths and MoMo cohorts (Figure 23). Cash <=4mths on the other hand, returns a non-significant lower retro-baseline than the corresponding non-migrant, but registers a positive DID, although with a p-value of 0.08 not quite statistically significant at the 95% probability level. Table 24 confirms that the Cash <=4mths is performing statistically better than the other three cohorts with negative DIDs.
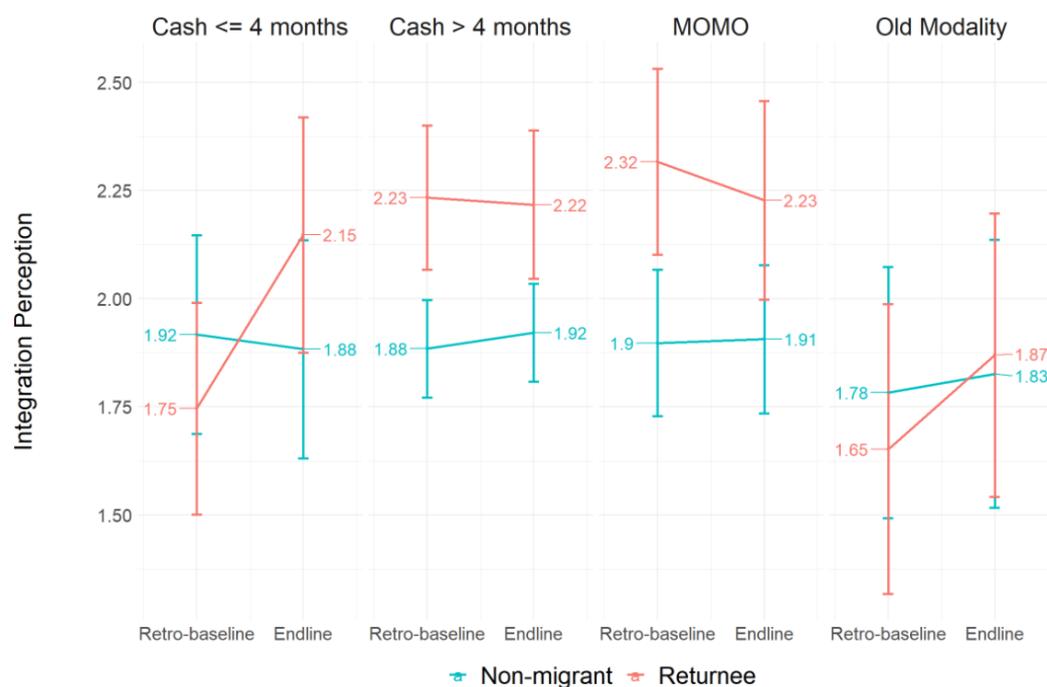
Figure 23 Observed returnee and non-migrant perceptions of re/integration (Likert scale not integrated = 0 to fully integrated = 4).
N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23

Figure 24 Figure 12 is repeated here for comparison with Psychosocial RSI. Psychosocial RSI at retro-baseline and endline for matched returnee-non-migrants
N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23

Table 23 DID for treatment cohorts
N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23.
Reference value = non-migrant retro-baseline (Cash >4mths,MoMo/in-kind modality, Cash <=4mths)

Term (cash > 4 months)	estimate	std error	statistic	p-value
Intercept	1.88	0.07	25.71	0.00
Endline	0.04	0.10	0.35	0.72
Returnee	0.35	0.10	3.39	0.00
DID – endline x returnee	-0.05	0.15	-0.36	0.72

Term (MoMo)	estimate	std error	statistic	p-value
Intercept	1.90	0.10	18.91	0.00
Endline	0.01	0.14	0.06	0.95
Returnee	0.42	0.14	2.95	0.00
DID – endline x returnee	-0.10	0.20	-0.49	0.63

Term (in-kind modality)	estimate	std error	statistic	p-value
Intercept	1.78	0.15	11.69	0.00
Endline	0.04	0.22	0.20	0.84
Returnee	-0.13	0.22	-0.60	0.55
DID – endline x returnee	0.17	0.30	0.57	0.57

Term (cash <= 4 months)	estimate	std error	statistic	p-value
Intercept	1.92	0.13	15.32	0.00
Endline	-0.03	0.18	-0.19	0.85
Returnee	-0.17	0.18	-0.96	0.34
DID – endline x returnee	0.44	0.25	1.74	0.08

Table 24 DID for returnee and non-migrant treatment cohorts
N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23.
Reference value = returnee retro-baseline Cash <=4mths (upper); = non-migrant retro-baseline Cash <=4mths (lower)

Term (returnee)	estimate	std error	statistic	p-value
Intercept	1.75	0.14	12.07	0.00
Endline	0.40	0.20	1.98	0.05
Cash > 4 months	0.49	0.17	2.90	0.00
MoMo	0.57	0.18	3.22	0.00
In-kind modality	-0.09	0.27	-0.34	0.73
DID – Endline X Cash > 4 months	-0.42	0.24	-1.77	0.08
DID – Endline X MoMo	-0.49	0.25	-1.97	0.05
DID – Endline X in-kind modality	-0.18	0.39	-0.48	0.63

Term (non-migrant)	estimate	std error	statistic	p-value
Intercept	1.92	0.11	17.82	0.00
Endline	-0.03	0.15	-0.22	0.83
Cash > 4 months	-0.03	0.13	-0.26	0.80
MoMo	-0.02	0.13	-0.15	0.88
In-kind modality	-0.13	0.20	-0.66	0.51
DID – Endline X Cash > 4 months	0.07	0.18	0.39	0.69
DID – Endline X MoMo	0.04	0.19	0.22	0.82
DID – Endline X in-kind modality	0.08	0.29	0.27	0.79

4.9.1 Testing re-forward integration scores at endline

Finding 17: There is no meaningful change for the one month previous and endline reintegration scores. This is reassuring in that it indicates a degree of stability of re-/integration perception at endline enumeration.

To test the sensitivity of the re-/integration score at endline, the same reintegration perception question was repeated by asking how respondents would answer the same question one month previous. This was only asked of returnees; therefore, Figure 25 presents the data from the three observations of self-perception, retro-baseline, one month before endline and contemporaneous endline for the 657 returnees responding to the endline-retro-baseline RSS+. As can be seen from the wide and overlapping confidence intervals, there is little difference across all three points, and no meaningful change for the one month previous and endline reintegration scores. It is reassuring in that while there are differences between one month before and contemporaneous endline re-/integration scores, these differences are very small indicating a reassuring degree of stability of that re-/integration perception at endline enumeration (Figure 25).
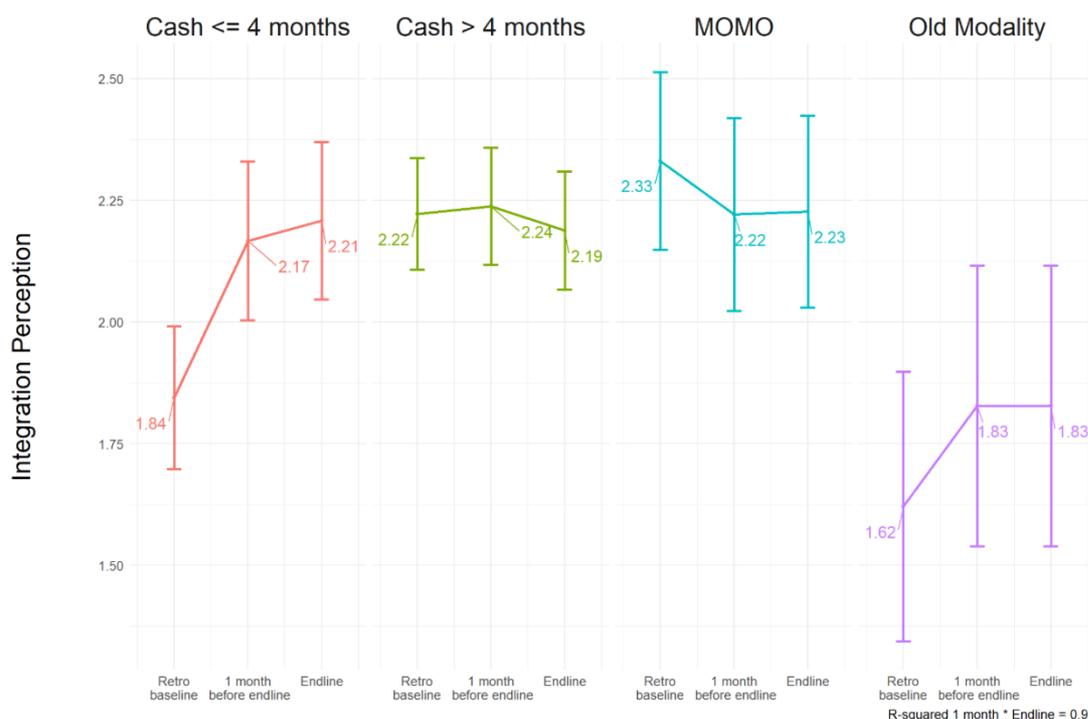
Figure 25 Integration perception from 657 returnees at retro-baseline, one month before endline and endline. Returnees N=657, Cash<=4mths=144, Cash>=4mths=321, MoMo/in-kind modality = 192

Table 25 DID model for 1 month before endline integration vs endline integration (returnees only)

Term (returnees)	estimate	std error	statistic	p-value
Intercept	2.17	0.09	23.39	0.00
Endline	0.04	0.13	0.32	0.75
Cash > 4 months	0.07	0.11	0.64	0.53
MoMo	0.05	0.13	0.43	0.67
In-kind modality	-0.34	0.23	-1.50	0.13
DID – Endline X Cash > 4 months	-0.09	0.16	-0.58	0.56
DID – Endline X MoMo	-0.04	0.18	-0.20	0.84
DID – Endline X in-kind modality	-0.04	0.32	-0.13	0.90

4.9.2 Adjusting integration perception for age sex education and treatment

An adjusted integration perception score was produced using the variables in Table 26. This introduces controlling variables to account for differences within the analyse cohorts along the dimensions not immediately and directly impacted by IOM assistance. The only significant coefficients at both retro-baseline and endline are the non-migrant-returnee contrast (labelled 'Returnee' in Table 26). The only other term that comes close to being significant is return to original community as opposed to a new one, which is positively associated with the p-value of 0.06 at endline and 0.18 at retro-baseline. Signifying that at endline, the differences between the returnees returning to their original and those returning to a new community are greater than at retro-baseline. The R squared for the adjustments at the retro-baseline and endline are very small (0.03 retro-baseline and 0.04 endline). The adjusted predictions for the matched returnee-non-migrant cohorts are presented in Figure 34 Linear regression models for timing of microbusiness assistance to a dispersion of RSI endline by days to microbusiness assistance

N=657, Cash<=4mths=144, Cash>=4mths=321, MoMo/in-kind modality = 192

Taking into account that these predictions are based upon means rather than individual observations and therefore the means are associated with narrow confidence intervals than those in Figure 23. While there is meaningful change in the returnee and non-migrant performance across

the two observations, the baseline reduction of the **Cash <=4mths** is reduced, there is an increased separation between the returnee and non-migrant cohorts resembling the returnee-non-migrant range seen in many of the previous analysis.

Table 26 Regression coefficients and p-values after adjusting for non-programme variables
Reference value non-migrant female with no education, difficult retro-baseline recall, returning to new community

Self perception of (re)integration	Retro-Baseline		Endline	
RSI Indicators	Coefficient	P-value	Coefficient	P-value
Age	0.003	0.43	0.01	0.01
Sex - Male	0.043	0.81	0.23	0.24
Primary/Religous School	0.213	0.24	0.02	0.90
High School	0.294	0.10	0.08	0.68
Vocational Training	0.029	0.92	0.12	0.70
University	0.215	0.25	0.07	0.70
Returnee	0.218	0.01	0.25	0.00
Recall - Easy	0.178	0.44	0.31	0.19
Recall - Neutral	-0.106	0.66	0.33	0.20
Return community - Original	0.167	0.18	0.24	0.06
Ret/NonMig: Retro_BL 316/322, EL 371/322	R^2	3.0%	R^2	4.0%

Legend P value Significance level
Sig. coefficient (p<=0.01)
Sig. coefficient (p>0.01 & <0.05)
Sig. coefficient (p>0.05 & <0.10)
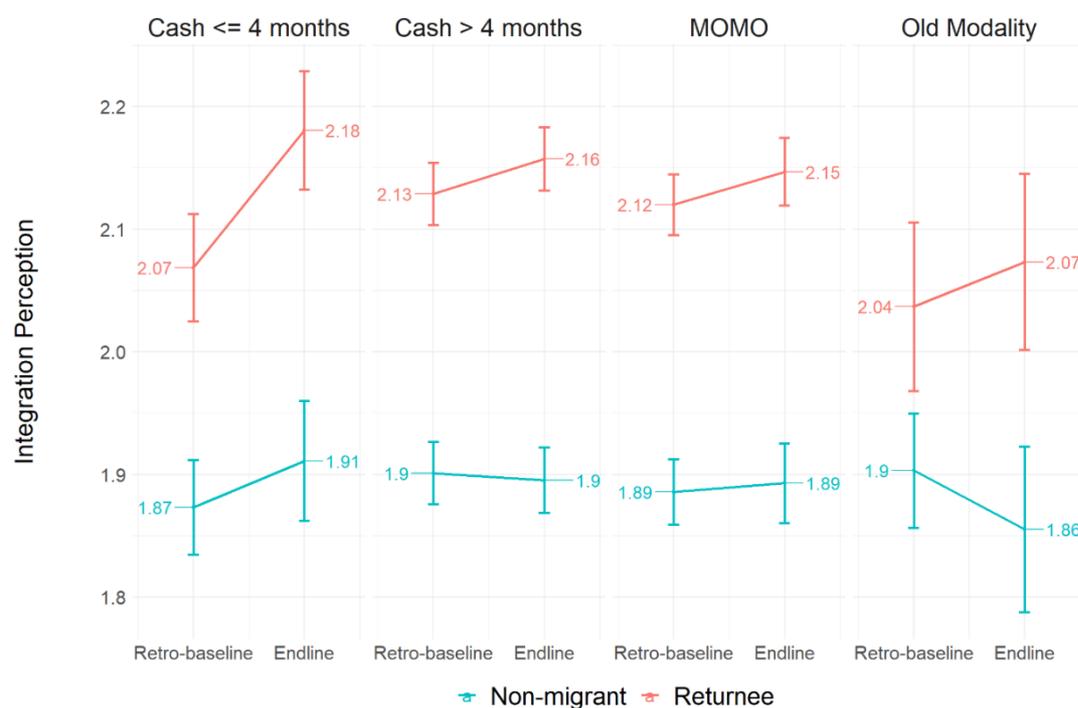
Figure 26 Adjusted returnee and non-migrant perceptions using terms in Table 29 for re/integration (Likert scale not integrated = 0 →fully integrated = 4).
N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23

4.9.3   Determinants of self-perception of re-/integration

The institutional RSI indicators along with returnee/non-migrant demographics were used as explanatory variables in a determinants regression model of self-perception re-/integration scores. The results of these regression analyses are presented in Table 27, with institutional RSI weights included for comparison. The R squared for this determinants model was lower than the logistic non-migrant propensity (self-perception 35/38% vs non-migrant propensity 88/74%).

These lower R squared values are also reflected in the small number of RSI indicators that are positively significant (p-value <= 0.05) in Table 27 (retro-baseline =4; endline =6) than in MIMIC determinants (13/7) or non-migrant propensity determinants (11/9 – Table 22).

There are five positively significant determinants indicators among the RSI indicators at both retro-baseline and endline. With just two being significantly positive in both retro-baseline and endline:

1. Econ_5 Debt to spending ratio
2. SOC_15 Access to justice and law enforcement in community

In terms of those positive significant RSI indicators, the number of those that have an above average RSI weight were 4/5 at retro-baseline and 3/5 at endline, a relatively good performance of weight emphasis matching compared to other RSI comparisons previously presented.

Table 27 Determinants of self-perception of re-/integration for retro-baseline and endline
N returnee-non-migrant matched pairs=371, Cash <=4mths =61, Cash >4mths =168, MoMo = 119, in-kind modality=23.
Reference value = non-migrant retro-baseline (**Cash** >4mths,MoMo/in-kind modality, Cash <=4mths)

Self perception of (re)integration	Retro-Baseline			Endline		
RSI Indicators	Coefficient	P-value	RSI Wts	Coefficient	P-value	RSI Wts
Pillar: Economic						
Econ_1 Satisfaction with current economic situation	-0.010	0.80	0.05	0.046	0.23	0.05
Econ_2 Frequency of food insecurity -INV	0.019	0.60	0.08	0.028	0.44	0.08
Econ_3 Financial inclusion	0.020	0.66	0.02	-0.029	0.55	0.02
Econ_4 Frequency of borrowing money - INV	-0.072	0.04	0.02	-0.105	0.00	0.02
Econ_5 Debt to spending ratio	0.162	0.00	**0.04**	0.127	0.01	**0.04**
Econ_6 Perceived access to employment and training	-0.074	0.11	0.03	-0.219	0.00	0.03
Econ_7 Currently working	0.029	0.45	**0.03**	0.039	0.33	0.03
Econ_8 Ownership of productive assets	0.025	0.55	0.03	0.164	0.00	**0.03**
Econ_9 Currently searching for a job - INV	-0.224	0.00	0.03	-0.184	0.00	0.03
Pillar: Social						
Soc_11 Access to Housing in community	-0.119	0.03	0.03	-0.095	0.08	0.03
Soc_12 Perceived standard of housing	0.007	0.89	0.03	0.048	0.37	0.03
Soc_13 Access to education in community	-0.093	0.03	0.03	-0.136	0.00	0.03
Soc_14 Children enrolled in school	-0.069	0.20	0.02	-0.055	0.27	0.02
Soc_15 Access to justice and law enforcement in community	0.173	0.00	**0.04**	0.157	0.00	**0.04**
Soc_16 Possession of ID	-0.187	0.09	0.05	-0.326	0.01	0.05
Soc_17 Access to documentation in community	0.035	0.37	-	0.028	0.50	-
Soc_18 Access to safe drinking water in the community	-0.342	0.01	-	-0.209	0.14	-
Soc_19 Access to healthcare	0.046	0.39	0.07	0.051	0.32	0.07
Soc_20 Quality/Adequacy of health care in community	0.042	0.36	0.03	0.036	0.40	0.03
Pillar: Psychosocial						
PSS_22 Participation in social activities	0.049	0.22	0.04	0.031	0.47	0.04
PSS_23 Strength of support network	0.094	0.16	0.03	0.152	0.02	**0.03**
PSS_24 Sense of belonging to community	0.303	0.00	**0.04**	0.266	0.00	0.04
PSS_25 Sense of physical security	-0.094	0.00	0.05	-0.134	0.00	0.05
PSS_26 Frequency of conflict with family /domestic tension-I	0.019	0.60	0.01	0.014	0.70	0.01
PSS_27 Feeling of discrimination in Country of origin-INV	-0.004	0.92	-	-0.027	0.46	-
PSS_28 Frequency of experiencing signs of distress-INV	0.005	0.89	0.04	0.047	0.16	**0.04**
PSS_29 Desire to receive psychological support	-0.029	0.57	0.03	0.016	0.76	0.03
PSS_30 Subjective ability to stay in Country of Origin	0.097	0.02	**0.10**	0.079	0.04	**0.10**
Pillar: Demographics						
Age	0.001	0.86		0.004	0.00	
Sex-Male	-0.200	0.22		-0.102	0.10	
Returnee	0.308	0.02		0.370	0.37	
Primary/Religous School	0.148	0.33		0.015	0.02	
High School	0.266	0.08		0.153	0.15	
Vocational Training	-0.148	0.58		0.085	0.09	
University	0.190	0.24		0.080	0.08	
Ret/NonMig: Retro_BL 370/369, EL 370/369	R^2	25.0%		R^2	28.0%	

Legend P value Significance level
Sig. coefficient (p<=0.01)
Sig. coefficient (p>0.01 & <0.05)
Sig. coefficient (p>0.05 & <0.10)

4.10 Insights gained from qualitative data analysis contrasted with empirical data

The qualitative data analysis has highlighted additional findings that are presented in this section.

Finding 18: Worsening conditions in Sudan impact reintegration processes and drive migration aspirations in both returnees and non-migrants.

Finding 19: Some returnees were able to work during their migration and used these funds to pay off their migration debts. This contributed to improving their economic reintegration upon return.

Finding 20: The qualitative findings suggest more nuances in the outcomes between returnees and non-migrants and that returnees are not necessarily better off than non-migrants as the quantitative findings indicate.

Finding 21: Qualitative evidence supports the arguments underlying the W model for reintegration in Sudan. However, the experience of return more commonly diverges from a W shape than meets the W pattern, as is consistent with contemporary academic evidence.

4.10.1 Contextualising reintegration in the Sudanese context

Both returnees and non-migrants concurred that conditions in Sudan have continued to worsen. It's agreed that in-country insecurity is the biggest factor, which has increased since the 2018–2019 Revolution. The continued protests have contributed to inflation and economic crisis. Furthermore, extensive drought in 2022 and environmental conditions have impacted farmers and rural livelihoods. Finally, the global COVID-19 pandemic led to several business closures. Overall, the context for reintegration is extremely challenging given conditions in the country which both non-migrants and returnees highlight as being very challenging.

Due to the challenges, several respondents (19 of the 32) comprising both returnees and non-migrants were considering migration at the time of interview. There was a preference for regular migration and not irregular migration. However, the main motivation was that worsening conditions in Sudan were making it too difficult to stay there: *"I cannot stay in my country under the current situation, yes, I need to migrate if the bad situation continues."* Respondents were highly aware of the risks of the migration, and many discussed a preference to stay in Sudan, but felt unable to do so due to the current country conditions.

4.10.2 Experiences of working abroad and migration debt

Approximately half of the returnees indicated that they were able to work at some point during their migration. (This contrasts to the cases of Somalia and Ethiopia wherein few respondents were ever able to work during their migration.) Due to their work in Libya some respondents returned debt free. In some cases, they may have even been able to contribute substantially to their family while abroad.

For example, Khalid, was able to work in Libya and could make enough money to pay off his migration debts and send money back to Sudan to improve the condition of his family. He got into a fight with a local, was arrested by the police, and taken to prison. He states: "*I was forced to return. I was hoping to stay as things were going well with me, but this problem happened, which was the reason for my return to Sudan.*" Upon return he struggles with his mental health; however, he was able to sell a house he had bought during his migration to support himself. With support also from IOM, he started a business that went well and was able to return to education. Today he is a teacher, married and working; he is doing well.

Khalid's case is quite exceptional in that he was able to acquire an asset during his migration. This was pivotal for him in his reintegration in that he was able to sell the house to support himself and take time to heal from his migration and start his business.

All respondents that had been able to pay off their migration debt prior to their return were able to use the assistance from IOM to focus on their new business. For returnees who still had migration debts, they often used the assistance from IOM to pay off their debts and then had nothing left to start their businesses.

As per the findings in Ethiopia and Somalia, debt has an influence on reintegration. Uniquely in Sudan, some respondents were able to work during their migration and return debt free, which contributed to improving their reintegration outcomes.

4.10.3 Comparative analysis of returnee and matched non-migrant pairs

Following on from Finding 7,[11] an important unexpected finding in this report is that returnees have a higher RSI than non-migrants. The qualitative analysis has looked further at 16 matched pairs of returnees and non-migrants in an effort to offer insights into this finding. An analysis was conducted between the matched pairs in three steps: first, comparing the RSI endline scores; second, comparing the well-being grid scores at the current moment; and third, through a subjective analysis of the qualitative interview transcripts (Qualitative results

Table 48 shows the results for each pair). In this subjective analysis the researcher read the transcripts from the returnee and non-migrant comparatively and made an assessment of who seemed in a better situation based on Economic, Social and Psychosocial dimensions.

The results of the analysis show that in all 16 pairs returnees had a higher RSI at endline, in 9 out of the 16 pairs returnees had a higher well-being grid score at endline; and in 4 out of the 16 pairs in the subjective qualitative assessment returnees were better off, 6 pairs were assessed as in a similar situation, and for the remaining 6 pairs the non-migrants were assessed as better off.

One example of a large divergence between returnees and non-migrants is as follows. Abdul is the non-migrant and has a very low RSI of 0.47, which places him in the vulnerable category with dimension scores: Economic – 0.28; Social – 0.31; Psychosocial – 0.64. Comparatively, the matched returnee, Ibrahim, has an RSI score of 0.71, thus considered as sustainably reintegrated, with the following dimension scores: Economic – 0.37; Social – 0.68; Psychosocial – 0.95.

However, in the qualitative interviews, the results present the opposite. Ibrahim, the returnee went to Libya and experienced many challenges. On returning to Sudan the situation was worse than when he left. Ibrahim experienced challenges with his mental health and economic situation upon return. Regarding the support from IOM he stated: *"No, it did not help me; it only solved the problems that were waiting for me upon my return such as the house rent and me and my children expenditure, because I did not find a job waiting for me upon my return."* At the time of the interview Ibrahim did not have a stable job or a way to support his family including four children. He was considering migrating again to try to support them.

In comparison, the matched non-migrant Abdul, went to university and received training as a tailor. He reports having good social relations and that his business is going well: *"I am satisfied with what I have achieved. I am satisfied because my plan is being implemented. I completed my education and have an academic qualification. I also work in the field I love. Praise be to God; I reached my goals. I wanted to be a talented tailor, and I am!"*

Ibrahim reported that due to his struggles, he has received support from Abdul, his matched non-migrant, whom is his good friend and has given him both financial and moral support. It is clear that in this case, there is a misalignment between the quantitative and qualitative findings. From the qualitative results it seems that the RSI scores of the matched non-migrant should be much higher and not in a situation of vulnerability.

One possible explanation is that this is an effect of relative deprivation reducing feelings of well-being.[12] Relative deprivation is a common theory of migration that people migrate to reduce their relative deprivation.[13] Relative deprivation reflects conditions of worsening poverty and inequality, and at the same time, can be measured by others in society or an individual's own past or future.[14] Chen (2015) finds that relative deprivation strongly effects relative poverty and measurements of inequality.

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[11] Finding 7: Unexpectedly, returnees in three out of four treatment cohorts returned significantly greater Overall RSIs than their corresponding non-migrants, both at baseline and at endline. However, there is no significant improvement over time for any of the returnee or non-migrant cohorts.

[12] Chen, X. (2015). Relative deprivation and individual well-being. *IZA World Labor*. 140. Available at: https://wol.iza.org/articles/relative-deprivation-and-individual-well-being.

[13] Stark, O. and Taylor, E. (1989). Relative Deprivation and International Migration. *Demography,* Vol. 26, No. 1 (Feb., 1989), pp. 1–14.

[14] Ibid.

The qualitative interviews demonstrate that non-migrant s are dissatisfied with their conditions and achievements in life and that their conditions have worsened in recent years. Thus, compared to their own pasts many are now worse off than before, thus are relatively deprived. Their perceptions of their own relative deprivation due to the worsening conditions in Sudan may explain their poor scoring on the RSI and well-being grid. Comparatively to the returnees in the subjective assessment, non-migrants are often doing better than returnees in terms of having employment, good health, good social relations, and having a more stable situation overall. Returnees on the other hand, may score themselves higher as they compare to the traumatic situations they faced in Libya and although they are struggling still feel relief and gratitude to have returned safely to Sudan. Therefore, compared to their own pasts of their migration experience they are no longer deprived. If this effect is common among both returnees and non-migrants responding to the endline-retro-baseline, the scoring Overall between the groups may be inflated upwards or downwards based on their situations. While this has the potential to occur in all of the three countries investigated in this study, Sudan is the country where it seems most likely to be prevalent due to the particularly challenging conditions that both returnees and non-migrants find themselves in and the deterioration in these conditions in recent years. Therefore, this phenomenon of relative deprivation could be a significant contribution to the unusual ranking of returnees consistently better than matched non-migrants across the two observations.

Second, as per Finding 19,[15] returnees that were able to acquire funds while abroad are in some cases better off than their matched non-migrant pairs. Therefore, not all cases are misaligned. In the case of Khalid presented above, he was better off at the time of interview than his matched non-migrant. Due to the resources he gained abroad he was able to support himself on his return, whereas his matched non-migrant was never able to get ahead staying and working in Sudan.

In summary, the qualitative findings suggest that there are more nuances in the outcomes between returnees and their matched non-migrants that is suggested in the RSI. There are cases where non-migrants are doing better at the time of interview and likewise there are cases where returnees are doing better at the time of interview. Further research would be necessary to ascertain if relative deprivation is informing the results and reducing feelings of well-being among the matched non-migrants, or possibly increasing feelings of well-being among returnees.

4.10.4 The W model compared and contrasted with well-being grids

The well-being grids (see Methodological Annex for details) were analysed to assess: first, the shape of the reintegration trajectory; second, the direction of the Overall trend line of the reintegration trajectory; and third the frequency of highs and lows in the reintegration process; and forth, to compare the self-perceived well-being with the RSI.

In assessing the shape of the well-being grid, zero respondents had a U-shaped trajectory, and one respondent had a W-shaped trajectory when considering their well-being grid from the time of return to the present moment. Therefore, the majority of respondents did not have either a W or U-shaped reintegration experience. Multiple shapes could be described from the resulting patterns of reintegration. As a result, the analysis focuses on the Overall trend line of the well-being grid, which can be described as an increase in well-being since return, a decrease in well-being since return, or an Overall plateau of well-being from return to the time of interview.

The trend lines of well-being show that most of the respondents felt that their well-being overall had increased from the time of return to the time of the interview (11), five had plateaued, but no respondents showed an overall decline.

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[15] Finding 19: Some returnees were able to work during their migration and used these funds to pay off their migration debts. This contributed to improving their economic reintegration upon return.

The well-being grids were also analysed to assess significant highs and lows in the reintegration process. A significant high and low is considered as a two-point change (on a scale of one to five) or more within the well-being grid over the reintegration process (from baseline to endline). Twelve respondents reported significant highs and lows in their reintegration process.

A significant low in the reintegration process was returning to the worsened conditions in Sudan. One respondent stated: *"After my return to Sudan, my family moved to another place, and my economic situation deteriorated, and I suffered greatly in light of the economic crisis that Sudan is going through, which negatively affected the lives of many families."*

Highs in the reintegration process were the initial return and to be with family. Most returnees' families were very accepting of the return migrant. A second high was to receive the reintegration assistance and start the business. Returnees were highly appreciative of the support from IOM.

4.10.5 Key findings and implications

Some of the findings from the qualitative analysis support the quantitative findings, including the impacts of the worsening conditions in Sudan on both returnees and non-migrants, and the positive impact of IOM's reintegration assistance on returnees. However, regarding the discrepancy between returnee and non-migrants' outcomes, the qualitative findings suggest that the situation is more nuanced than the quantitative findings suggest. This indicates the need for caution in the interpretation of the quantitative results as returnees are not necessarily better off than non-migrants as the data suggests. Further research would be necessary to test the hypothesis that relative deprivation is reducing non-migrants' well-being perceptions in their responses.

Additional reflections can be drawn from the qualitative analysis that were not reflected in the quantitative findings. This includes the importance of returnees being able to work during their migration and pay off their debts prior to return, versus returning to a situation of debt.

The qualitative evidence for Sudan (follows from the Ethiopia and Somalia analysis) supports the arguments underlying the W model for reintegration; that is:

- Returnees experience shocks at different stages of their reintegration process that can impede their coping capacities,

- Returnees experience highs and lows in their reintegration process, and

- That mapping returnees' experiences can help to identify trends in beneficiaries' experiences.

However, the evidence also shows that the experience of return more commonly diverges from a W shape than meets the W pattern, as is consistent with contemporary academic evidence. This is important methodologically for working with beneficiaries and capturing their experience without leading the respondent towards the desired pattern or response. A simple grid tool is more neutral for using with beneficiaries to capture their experiences than a pre-printed W. (The suggested methodology for the W model is to show returnees a piece of paper with a pre-printed W on it and to then ask them to indicate their highs and lows in their experiences on the pre-printed W.)

Future research with wider application of a grid tool and a larger sample would be able to then determine comment shape trajectories in reintegration processes. This further analysis and categorisation of shape trajectories could assist in identifying common reintegration trajectories and understanding how to best support returnees in these different patterns of experiences.

5   JI-HoA assistance and reintegration

5.1   What was the effect of the assistance provided by the JI?

The analysis below is conducted on the full sample of 657 endline-retro-baseline enumerated returnees excluding those that didn't answer or did not know or gave some other answer than the five categories presented in Figure 27 (N=647). Descriptive analysis of the microbusiness support, including the types of support provided, and numbers of recipients can be found in the Technical Annex.

5.1.1   Effect of microbusiness support on reintegration outcomes

Finding 22: Returnees who had an operating microbusiness, whether it was struggling or successful, typically returned significantly positive coefficients across the reintegration measures. This provides empirical evidence of a strong positive signal from the operation of a microbusiness to improvements in reintegration.

Finding 23: Variation in RSI delta was significantly positive for all three modality modes against the reference modality of Cash <=4mths.

Finding 24: There is no significant signal from SIYB training. This holds for all of the procurement modalities and for all of RSI and integration perceptions, both endline and delta.

Across most dimensions of Figure 27 there is not much of a pattern. We often see little to no change in RSI scores and minimal differences across microbusiness performance, that is except for those with a successful business. We see small growth in their RSI Overall score resulting in an endline score higher than other groups, especially compared to those who closed their business as they saw a decline in their overall score. The biggest difference is observed in the RSI Economic scores with significant growth by 0.13 for those with a successful business. Those who are struggling also saw growth to a lesser extent. There is no pattern in the social or PSS scores other than those with successful business being higher at both time points.

Figure 31 emphasises this lack of change in Social and Psychosocial scores, although it shows that successful returnees were the only group to average positive change. The growth in Economic and Overall scores are significantly higher than those who had closed or not started their business, but not statistically different from those who were struggling.

Finally, Figure 29 shows that those with a struggling business reported the highest levels of self-perceived integration. There was an improvement in self-perception in those Not started/Preparing, but this cohort had the significantly lowest retro-baseline starting point. Those with a closed business saw their perception decrease on average although not statistically significant. There was little change amongst those with a successful business.
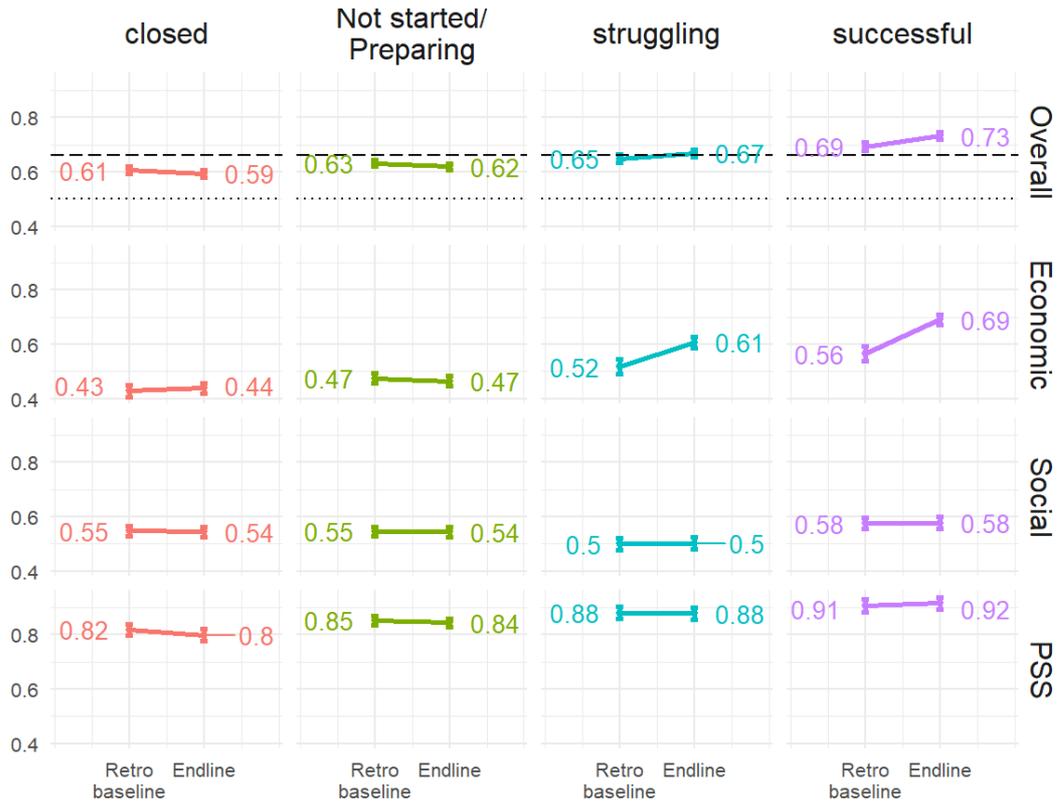
Figure 27 RSI scores (Overall and dimension) at retro-baseline and endline by the reported success of the microbusiness
N=647; closed 196, not started/preparation114, struggling 123, successful 114
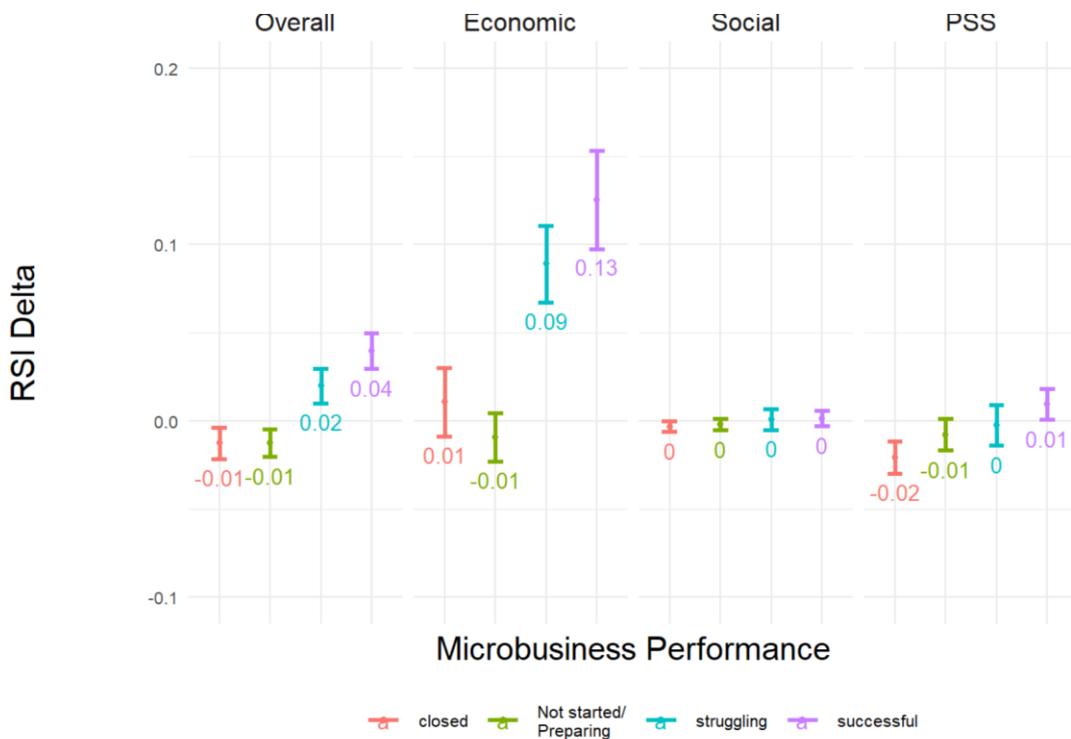
Figure 28 Average changes in RSI retro-baseline-endline delta scores by microbusiness performance
N=647; closed 196, not started/preparation114, struggling 123, successful 114
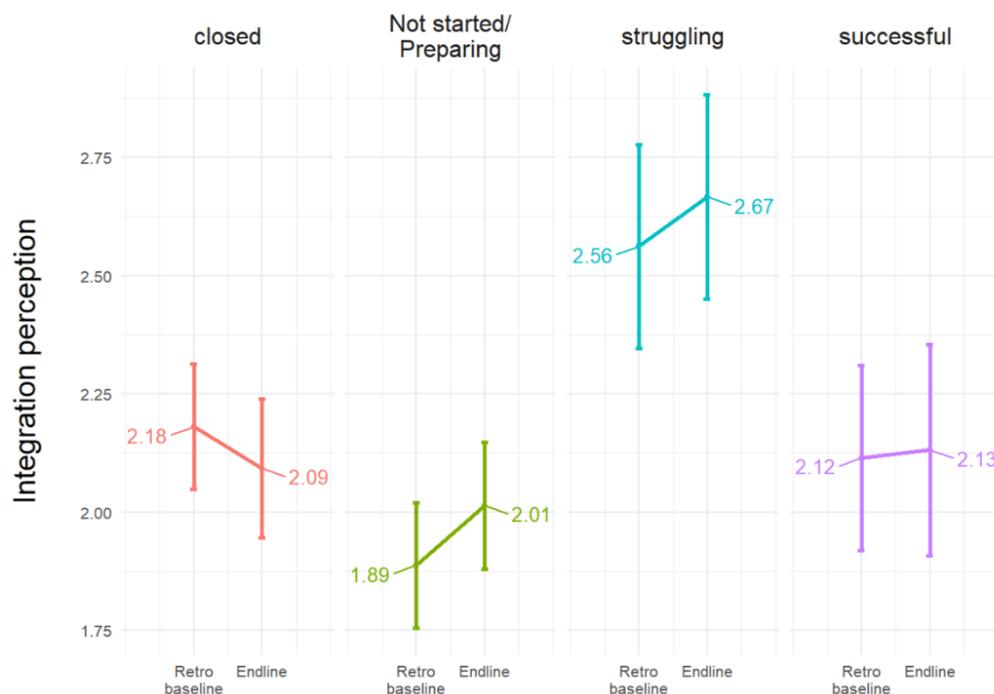
Figure 29 Self-perception of integration at retro-baseline and endline by microbusiness performance categories
N=647; closed 196, not started/preparation114, struggling 123, successful 114

Table 28 Determinants of IOM assistance package delivery of institutional RSI endline, retro-baseline-endline delta and integration perception score endline for all returnees

Model term	RSI institutional Endline		RSI Delta		Integration perception endline		Integration perception Delta	
	estimate	p.value	estimate	p.value	estimate	p.value	estimate	p.value
EL Gazira	0.041	0.00	0.002	0.83	0.171	0.30	-0.074	0.53
Khartoum	0.028	0.00	-0.001	0.80	0.066	0.51	-0.004	0.95
Kordofan	0.02	0.16	0.001	0.96	-0.023	0.90	0.051	0.68
Other	0.03	0.03	-0.002	0.81	-0.033	0.84	0.1	0.39
Ease recall - Difficult	-0.021	0.51	0.013	0.53			-0.285	0.30
Ease recall - Easy	0.041	0.00	-0.019	0.01			-0.351	0.00
MOMO	-0.004	0.70	0.036	0.01	0.121	0.36	-0.347	0.00
Old Modality	-0.038	0.04	0.047	0.01	-0.267	0.23	-0.128	0.42
Cash over 4 months after arrival	0.02	0.03	0.031	0.01	0.052	0.65	-0.237	0.00
SIYB	0.008	0.24	0.004	0.39	-0.077	0.37	-0.073	0.23
Microbusiness performance - Not started/Preparing	0.019	0.04	0.007	0.24	0.005	0.96	0.179	0.02
Microbusiness performance - Struggling	0.067	0.00	0.035	0.01	0.473	0.00	0.146	0.10
Microbusiness performance - Successful	0.127	0.00	0.054	0.01	-0.008	0.95	0.062	0.50
Reinteg support satisfaction - Satisfied/Very	0.031	0.01	-0.006	0.31	0.037	0.73	0.061	0.43
Timely Return	0.008	0.25	-0.011	0.02	-0.015	0.86	0.045	0.47
Assistance matched expectations - Partially	0.04	0.01	0.028	0.01	-0.667	0.00	-0.137	0.15
Assistance matched expectations - Yes	0.011	0.39	0.029	0.00	0.016	0.92	0.046	0.67
Pressure to return - Yes	0.004	0.82	-0.02	0.13	0.664	0.01	0.167	0.34
N Returnees- 657	N returnees = 0.31	R2= 0.31	N returnees = 623	R^2= 0.20	N returnees = 621	R^2 = 0.16	N returnees = 618	R^2 = 0.11

The model base reference levels for all three models in Table 28 are:

1. Reference Levels Location = Darfur
2. Ease recall = neutral
3. Treated level = Cash <=4mths
4. SIYB = NO SIYB
5. Microbusiness performance = closed
6. Reintegration support satisfaction = dissatisfied/very dissatisfied
7. Timely return = Too soon/not enough time
8. Assistance matched expectations = not at all
9. Pressure to return = no

The comparisons presented in Table 28 provide a series of further useful findings. The R^2 for the first two models are moderate (RSI endline =31% & RSI delta =20%), whereas the determinants of

integration perception account for less of the perception variation, with R^2 of just 16% for the endline and just 11% for the delta.

The reference value of microbusiness performance was closed, so it is not surprising that in the RSI endline model all of the other microbusiness performance indicators were statistically significantly positive for RSI endline. Two of these (microbusiness struggling and microbusiness successful) persisted as positive significant indicators for the RSI delta model, indicating that **returnees who had started their microbusiness had significantly higher RSI endline scores, and larger changes to their RSI reintegration scores, than those without an operating microbusiness**. But somewhat surprisingly, it was only microbusiness performance-struggling that was significantly positive in the integration perception model (Table 28).

Having a timely return rather than too soon or not enough time to prepare for return was also significantly positively associated with a higher RSI endline score, but not in the other two models.

In the RSI delta model, all procurement modalities were significantly positive compared to the reference value of Cash <=4mths. At the RSI endline, only **Cash >4mths** a positive significant predictor of RSI endline variation (p-value =0.03), while in the RSI delta model, all of the procurement modalities performed statistically lease significantly positive against the reference modality of **Cash <=4mths**. Yet for both integration perception endline and integration perception delta none of the procurement modalities reached close to statistical significance, indicating the different modalities did not account for any differences in the variation of integration perception.

Interestingly, start and improve business (SIYB) training does not significantly account for variation in any of these three modelled reintegration indices, suggesting that this training added little value relative to the initial training itself.

5.1.2   Interactions between SIYB and microbusiness

All three of the determinants models in Table 28 indicated that SIYB training is not a significant determinant of any of these reintegration indices. This is further confirmed visually in the graphs of RSI endline scores by modality, with and without SIYB, which show there is no statistical difference in the four reintegration measures (RSI endline, RSI delta, integration perception endline, and integration perception delta) for the different combinations of microbusiness modality and SIYB training (Figure 30, Figure 31 and Figure 32).
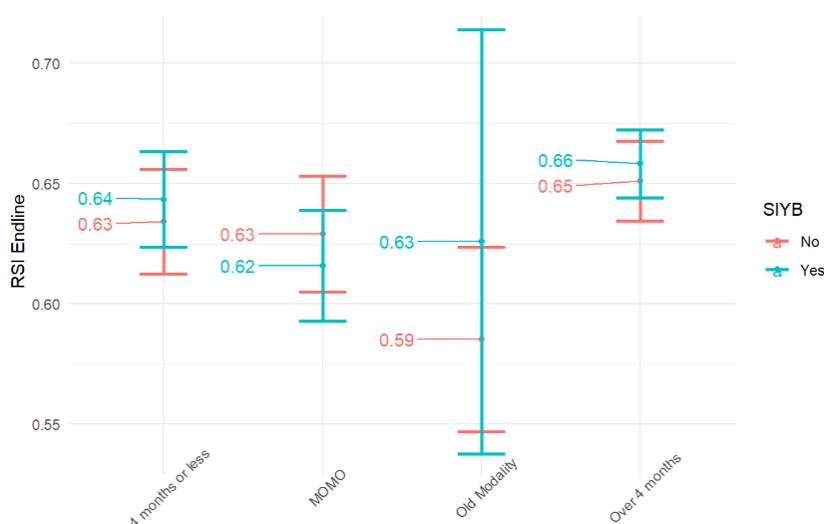
Figure 30 Mean and confidence interval plot of RSI endline by procurement modalities with SIYB yes/no data series
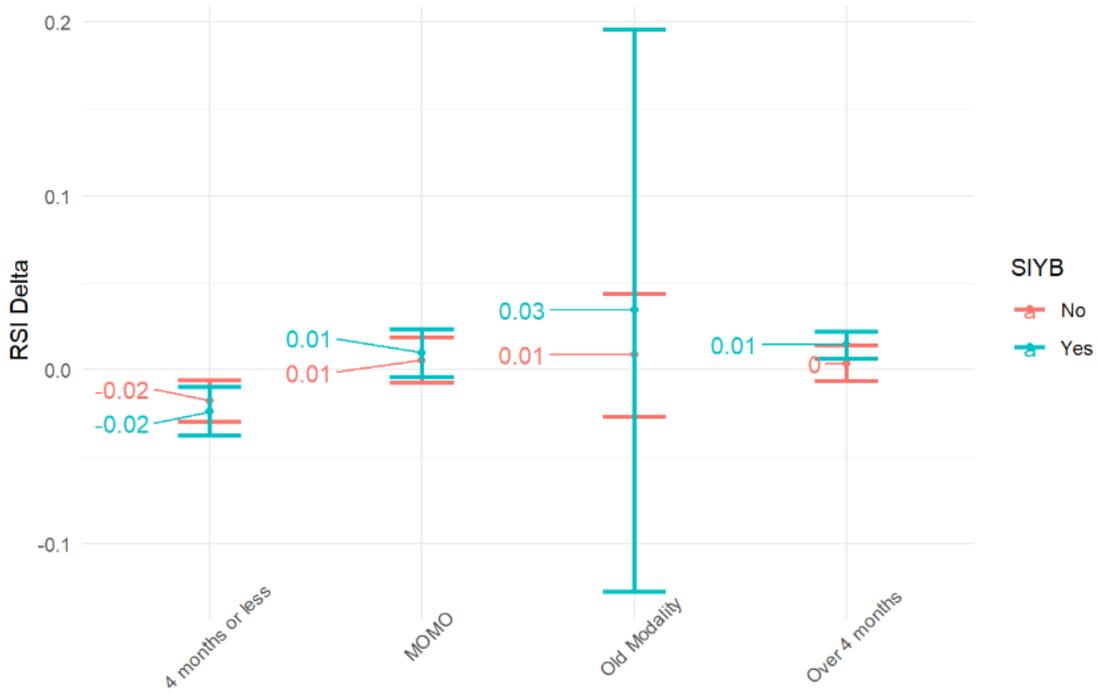
Figure 31 Mean and confidence interval plot of RSI delta by procurement modalities with SIYB yes/no data series
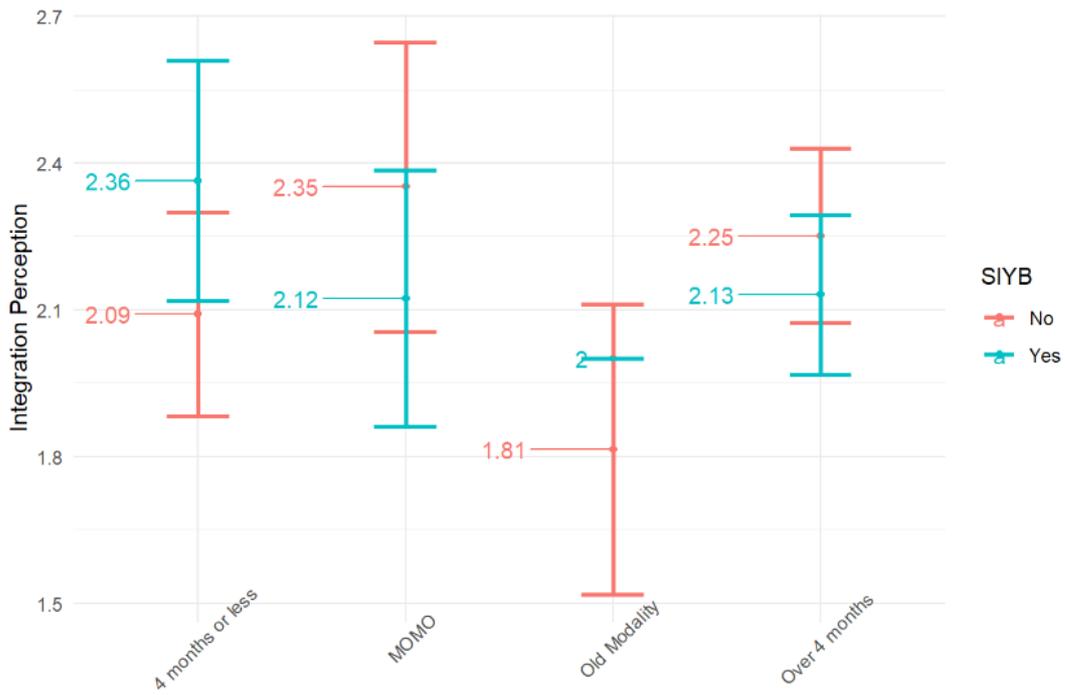
Figure 32 Mean and confidence interval plot of integration perception endline by procurement modalities with SIYB yes/no data series
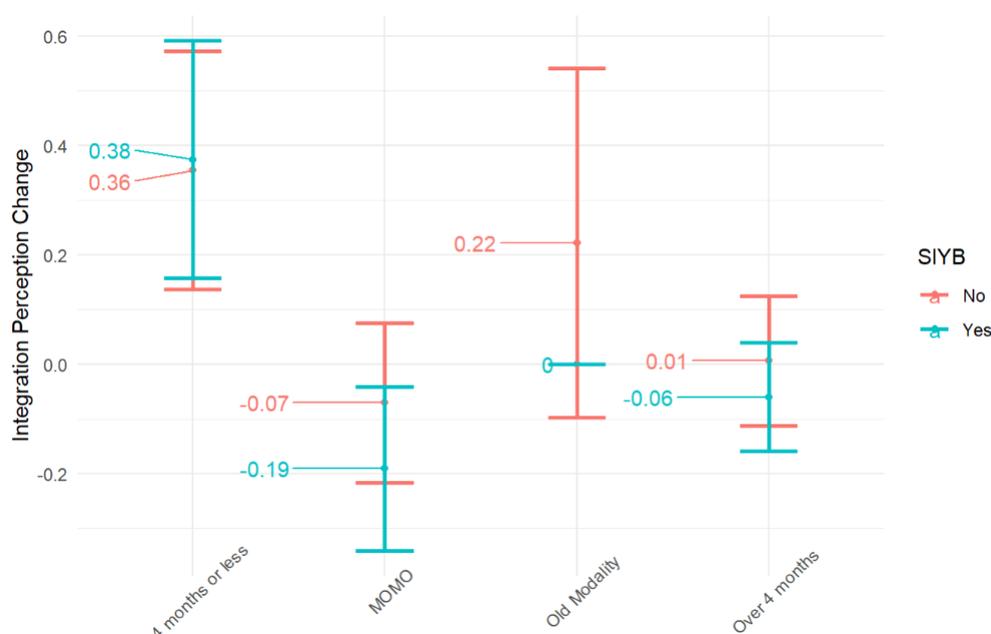
Figure 33 Mean and confidence interval plot of integration perception delta by procurement modalities with SIYB yes/no data series.

5.2 Days to receive assistance and days with assistance

This section considers how the time from return to the provision of reintegration assistance to returnees has affected their reintegration. This analysis is conducted only on returnees receiving microbusinesses support, though takes into account all modalities and timings of payments.

Finding 25: There is evidence that gains in RSI endline scores dimmish rapidly with increasing number of days to receive the cash assistance (from the cohort receiving cash within four months of their return (Cash <=4mths)). While other procurement modes showed little impact of days to receipt of assistance on RSI endline scores.

Finding 26: Returnees who received part of their microbusiness support as quick cash (Cash <=4mths) had a smaller average growth in their RSI scores than those who received through in-kind modality, MoMo or Cash >4mths.

Figure 34 provides a scatterplot of Sudanese RSI endline scores, plotted against the days from arrival to receipt of microbusiness assistance, disaggregated by procurement modality, with linear regression lines fitted. Table 29 provides the model estimates for the same set of data.

Figure 34 shows that among all three cohorts there is a wide dispersion of RSI endline scores, with little evidence of a time-related trend. However, the modelled results show that those receiving **Cash <=4mths** on average had significantly higher RSI endline scores than those receiving **MoMo (**p-value = 0.028, Table 29) and **Cash >4mths** (p-value = 0.025, Table 29). **In-kind modality** (p-value = 0.01, Table 29). Those receiving their **Cash <=4mths** also display a significantly negative gradient with diminishing returns to any wait for their assistance. However, once that wait reaches 4 months, there is no further disadvantage on average, indicated by the horizontal green line for **Cash >4mths** in Figure 34. There is also an overall negative effect of days to assistance but this is likely due to the influence of the steep gradient we see amongst those quickly receiving their cash. Note that the Overall R^2 for this model is very low at just 4%.
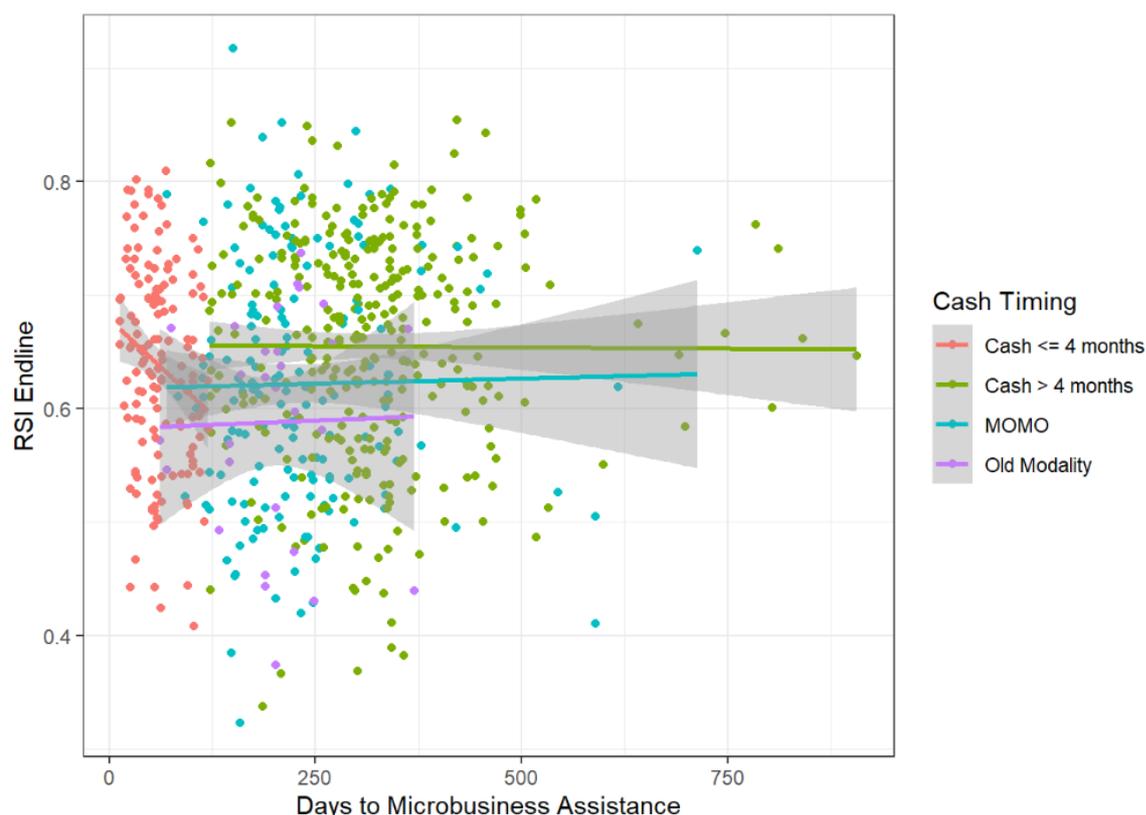
Figure 34 Linear regression models for timing of microbusiness assistance to a dispersion of RSI endline by days to microbusiness assistance
N=657, Cash<=4mths=144, Cash>=4mths=321, MoMo/in-kind modality = 192

Table 29 Model estimates for days to receive assistance and RSI endline. Reference level Cash <=4mths

Term	estimate	std error	statistic	p-value
Intercept	0.6791	0.020	34.622	0.000
Cash > 4 months	-0.0227	0.025	-0.898	0.369
MoMo	-0.0615	0.028	-2.198	0.028
In-kind modality	-0.0968	0.060	-1.618	0.106
Days with assistance	-0.0007	0.000	-2.315	0.021
Cash > 4 months X days with assistance	0.0007	0.000	2.270	0.024
MoMo X days with assistance	0.0007	0.000	2.296	0.022
In-kind modality X days with assistance	0.0007	0.000	1.789	0.074

R2 0.04

Figure 35 and Table 30 present a similar analysis to the above but using the change in RSI scores from baseline to endline (RSI delta), rather than the RSI endline score. The analysis finds that those receiving cash assistance within 4 months of their arrival (**Cash <=4mths**) had, on average, significantly lower growth in their RSI scores between baseline and endline than those receiving **MoMo** or **Cash >4mths. In-kind modality** was on average greater than **Cash <=4mths**, but not significantly so. Surprisingly, those receiving their cash within 4 months display a significantly positive gradient, with those receiving their assistance very quickly having lower rates of growth than those who waited a couple months more. Although it could be argued that such a short spread of delivery might not be meaningful or, been provided with assistance from microbusiness very quickly may have resulted from rushed microbusiness planning, that in the end was less successful.

There is an overall positive effect of days to assistance, but this is likely due to the influence of the steep gradient we see among those quickly receiving their cash in less than four months. In comparison, the gradients for the **MoMo, in-kind modality** or **Cash >4mths** are relatively flat. Note that the Overall R^2 for this model is just 4%.
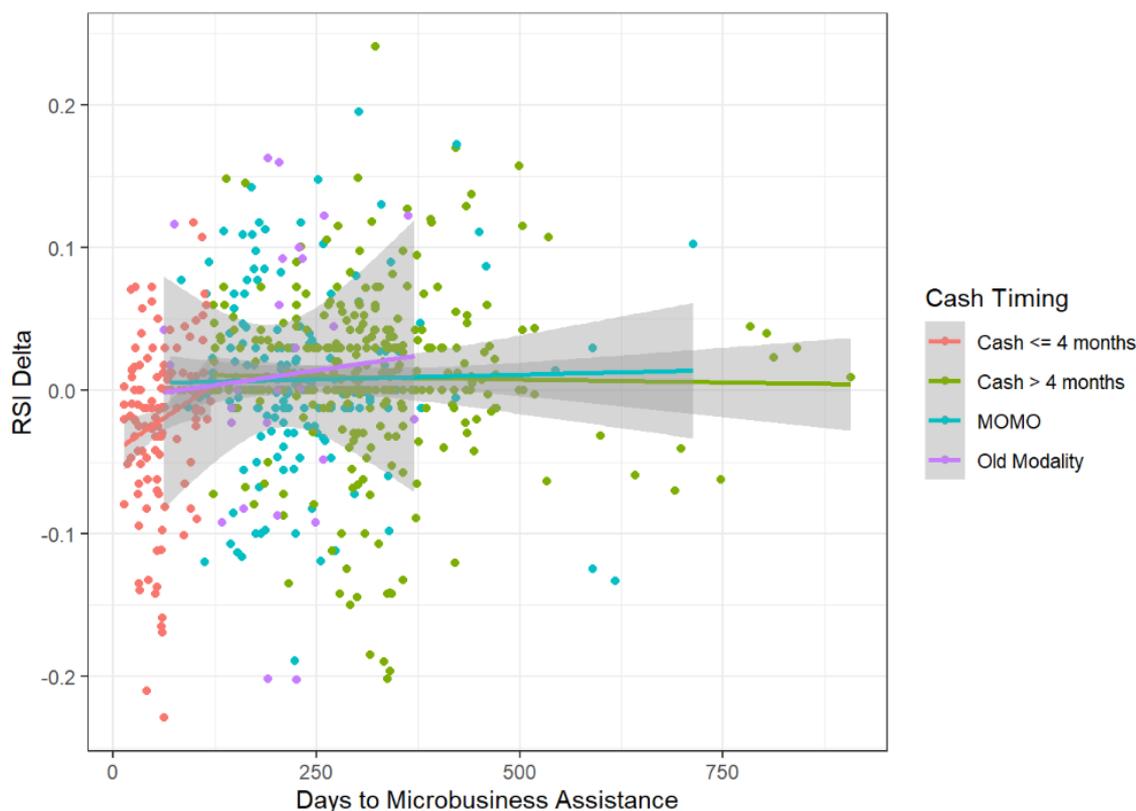
Figure 35 Linear regression models for timing of microbusiness assistance to a dispersion of RSI delta by days to microbusiness assistance

Table 30 Model estimates for days to receive assistance and RSI delta
N=657, Cash<=4mths=144, Cash>=4mths=321, MoMo/in-kind modality = 192. Reference level Cash <=4mths

Term	estimate	std error	statistic	p-value
Intercept	-0.0428	0.012	-3.569	0.000
Cash > 4 months	0.0548	0.016	3.532	0.000
MoMo	0.0476	0.017	2.778	0.006
In-kind modality	0.0365	0.037	0.996	0.320
Days with assistance	0.0004	0.000	2.128	0.034
Cash > 4 months X days with assistance	-0.0004	0.000	-2.146	0.032
MoMo X days with assistance	-0.0004	0.000	-1.985	0.048
In-kind modality X days with assistance	-0.0003	0.000	-1.234	0.218

R2 0.04

5.3 Days with microbusiness assistance

Finding 27: There is no significant relationships between the RSI endline scores and the length of time since the receipt of assistance, regardless of modality.

Finding 28: Returnees who have had their microbusiness assistance for longer, have lower growth in their RSI scores.

Figure 36 shows a scatterplot of the days with microbusiness assistance with fitted linear regression models for the four procurement modalities, with Table 31 providing the related modelling. The Overall R^2 for this model is just 3%, resulting in 97% of the variation in RSI endline not been accounted for by the model.

We see no significant gradient for any of the four modalities; each maintains a fairly horizontal line across their time scale. Likewise, there is no significant Overall relationship between days with microbusiness assistance and RSI endline scores.

Overall, there is a statistically significant negative effect of days with assistance (p-value = 0.003, Table 32), indicating that the longer a returnee had their microbusiness funding the smaller increase they experienced in their RSI score. This effect was largely due to a clear decreasing trend amongst those receiving microbusiness assistance in **Cash <4months** and **in-kind modality**, and smaller declines in the other two modalities (Figure 37).

Self-perceptions also analysed in the same way, but so little variation in the reintegration perception score was accounted for that the analysis is not presented here.
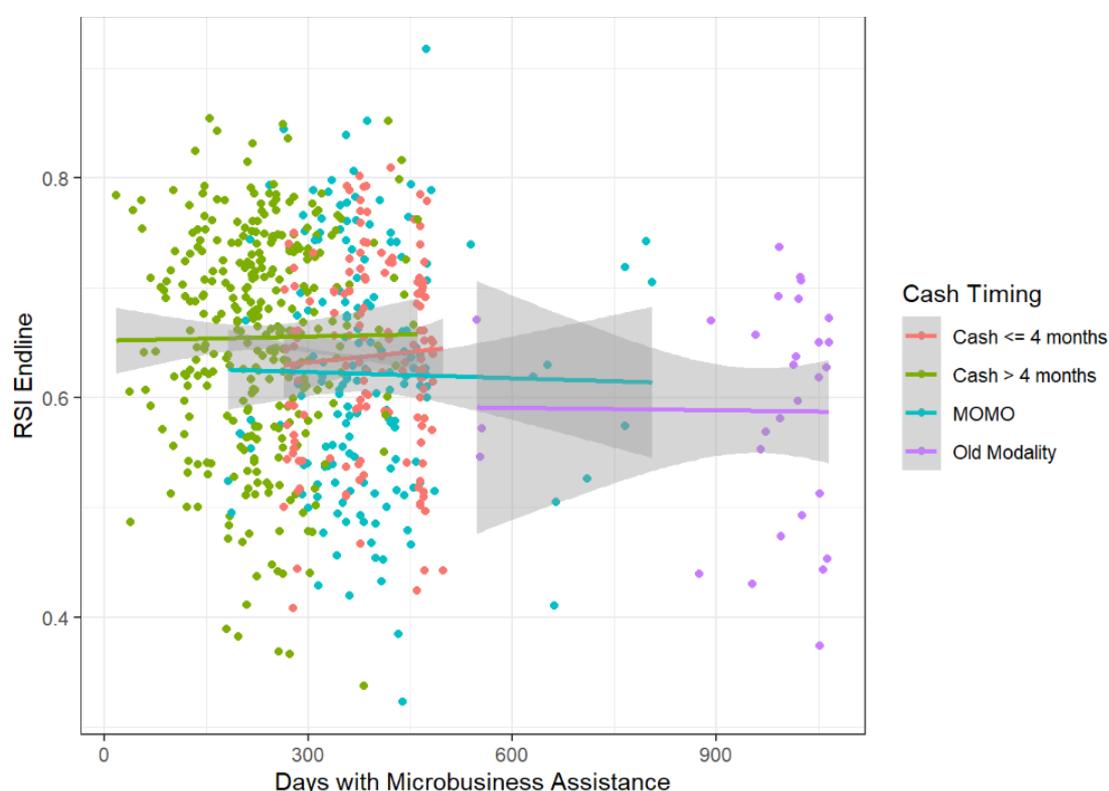

Figure 36 Linear regression models for days with of microbusiness assistance to a dispersion of RSI endline by days to microbusiness assistance

Table 31 Model estimates for days with microbusiness assistance and RSI endline
N=657, Cash<=4mths=144, Cash>=4mths=321, MoMo/in-kind modality = 192). Reference level Cash <=4mth

Term	estimate	std error	statistic	p-value
Intercept	0.6130	0.046	13.260	0.000
Cash > 4 months	0.0389	0.049	0.794	0.428
MoMo	0.0160	0.055	0.292	0.770
In-kind modality	-0.0176	0.131	-0.134	0.893
Days with assistance	0.0001	0.000	0.548	0.584
Cash > 4 months X days with assistance	-0.0001	0.000	-0.378	0.706

Term	estimate	std error	statistic	p-value
MoMo X days with assistance	-0.0001	0.000	-0.598	0.550
In-kind modality X days with assistance	-0.0001	0.000	-0.417	0.677

R2 0.03
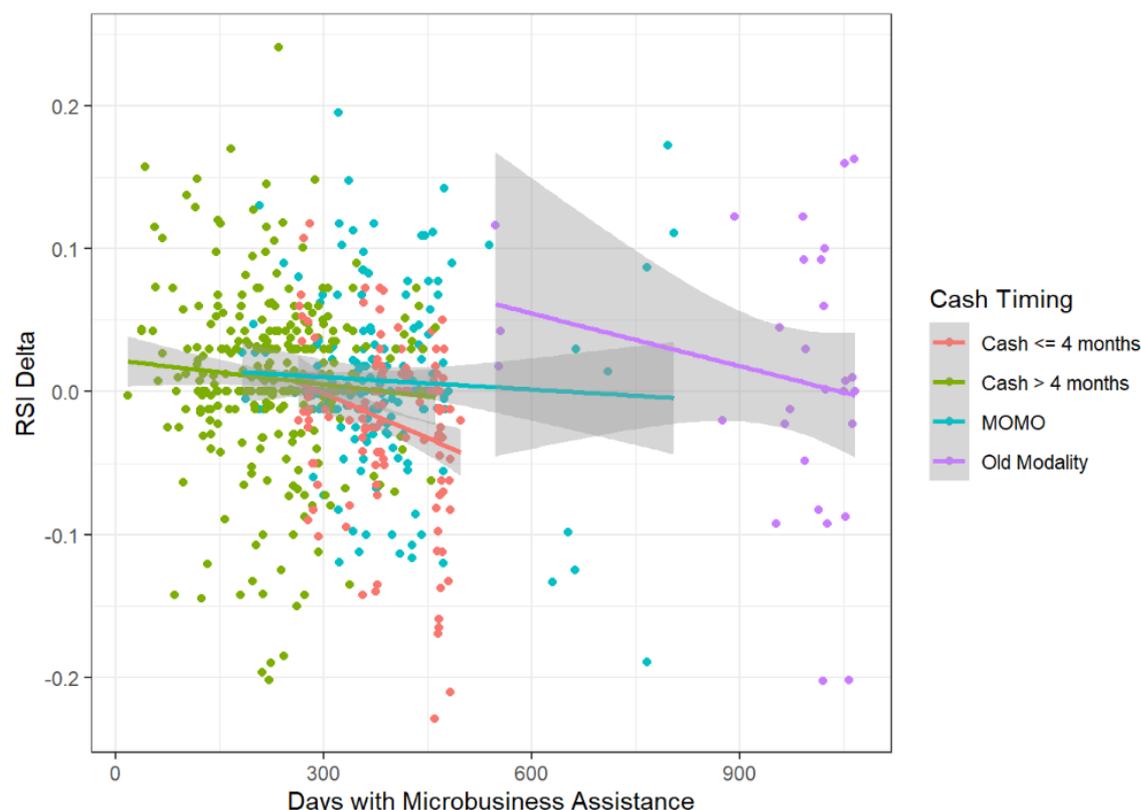

Figure 37 Linear regression models for days with of microbusiness assistance to a dispersion of RSI delta by days to microbusiness assistance

Table 32 Model estimates for days with microbusiness assistance and RSI delta
N=657, Cash<=4mths=144, Cash>=4mths=321, MoMo/in-kind modality = 192. Reference level Cash <=4mths

Term	estimate	std error	statistic	p-value
Intercept	0.0615	0.028	2.198	0.028
Cash > 4 months	-0.0394	0.030	-1.327	0.185
MoMo	-0.0425	0.033	-1.279	0.201
In-kind modality	0.0670	0.079	0.845	0.398
Days with assistance	-0.0002	0.000	-2.949	0.003
Cash > 4 months X days with assistance	0.0002	0.000	1.861	0.063
MoMo X days with assistance	0.0002	0.000	2.146	0.032
In-kind modality X days with assistance	0.0001	0.000	0.824	0.410

R2 0.06

6   Findings and conclusions

The standout features of this programme – both the unique approach to reintegration and the scale and rigour of the evaluation – make it an important intervention from which to learn. In this section we reconsider the findings presented throughout the report and present conclusions for each of the key analysis dimensions.

6.1 List of findings

Ease of recall

Finding 1: Returnees that indicated recall ease had a significantly higher average retro-baseline Overall RSI scores compared to the natural recall category, but given the lack of trend in the Overall RSIs, this may not be related to ease of recall. Non-migrants did not exhibit any significant differences between retro-baseline Overall RSI scores.

Finding 2: Returnees that indicated recall ease had a significantly higher average retro-baseline reintegration perception scores compared to the neutral recall category, but given the lack of trend in the reintegration perception scores this may not be related to ease of recall. Non-migrants did not exhibit any significant differences between retro-baseline integration perception scores.

Finding 3: Difficulty of recall was statistically significantly less likely to be experienced by returnees and non-migrants, but no other demographic characteristics were predictive of ease of recall.

RSI Overall

Finding 4: There is an Overall slight decline in RSI scores over time. The Cash <=4mths performed best on average over the course of the evaluation, while in-kind modality and MoMo cohorts resulted in an endline RSI score significantly lower than both the Cash <=4mths cohort and the notional 0.66 threshold score.

RSI dimensions

Finding 5: The three individual dimensions perform differently to the Overall RSI across the three cohorts of returnees. The MoMo in-kind modality cohort have significantly higher baseline and endline scores under the Social dimension, but return the lowest scores for the Economic and Psychosocial dimensions.

Finding 6: MoMo/in-kind modality and Cash >4mths return significantly positive difference-in-differences (DIDs) for the Economic dimension, indicating that their RSI scores improve significantly more than the Cash<=4mths cohort. However, there are no significant DIDs in the Social or Psychosocial dimensions.

Finding 7: Unexpectedly, returnees in three out of four treatment cohorts returned significantly greater Overall RSIs than their corresponding non-migrants, both at baseline and at endline. However, there is no significant improvement over time for any of the returnee or non-migrant cohorts.

Finding 8: All cohorts of returnees have dimension RSI scores which are greater than their corresponding non-migrant cohort. This confirms that the notion of convergence is not applicable in the case of Sudan.

Finding 9: There are also no significant increases in returnee reintegration scores from baseline to endline, with the exception of the Economic RSI for Cash>4mths and MoMo/in-kind modality which both have positive retro-baseline-endline trends.

Other reintegration measures

Finding 10: The MIMIC confirms the finding of the Overall institutional RSI that there are no significant trends between baseline and endline. However, there are differences between the two models in terms of rank order among returnee and non-migrant cohorts.

Finding 11: The expert weighting in the Overall institutional RSI is not well matched with the statistically significant positive indicator coefficients derived from the MIMIC models.

Finding 12: There are differences in the significant indicators at retro-baseline and endline, implying that the single set of weights may not be relevant over time. Only three indicators (all Psychosocial) are positively significant at both retro-baseline and endline, underlining the challenge of a one size fits all weighting system.

Finding 13: Most MIMIC RSIs also see returnees outperforming non-migrants, except for Economic MIMIC RSI Cash <=4mths and in-kind modality. There were multiple differences in rank between the four modalities when comparing MIMIC and RSI dimension scores.

Finding 14: The alignment of the MIMIC coefficients and the RSI weights was unsurprisingly imperfect, with significantly positive retro-baseline and endline MIMIC variables not always reflected in higher RSI weights.

Finding 15: There is no increase in returnees' propensity to have a non-migrant identity, and numerically the propensity values diverged slightly.

Finding 16: On average, returnee perceptions of reintegration do not improve over time. Only Cash <=4mths returnee cohort shows a statistically significant positive DID compared to the non-migrants.

Finding 17: There is no meaningful change for the one month previous and endline reintegration scores. This is reassuring in that it indicates a degree of stability of re-/integration perception at endline enumeration.

Qualitative insights

Finding 18: Worsening conditions in Sudan impact reintegration processes and drive migration aspirations in both returnees and non-migrants.

Finding 19: Some returnees were able to work during their migration and used these funds to pay off their migration debts. This contributed to improving their economic reintegration upon return.

Finding 20: The qualitative findings suggest more nuances in the outcomes between returnees and non-migrants and that returnees are not necessarily as better off than non-migrants as the quantitative findings indicate.

Finding 21: Qualitative evidence supports the arguments underlying the W model for reintegration in Sudan. However, the experience of return more commonly diverges from a W shape than meets the W pattern, as is consistent with contemporary academic evidence.

Microbusiness and JI support

Finding 22: Returnees who had an operating microbusiness, whether it was struggling or successful, typically returned significantly positive coefficients across the reintegration measures. This provides empirical evidence of a strong positive signal from the operation of a microbusiness to improvements in reintegration.

Finding 23: Variation in RSI delta was significantly positive for all three modality modes against the reference modality of Cash <=4mths.

Finding 24: There is no significant signal from SIYB training. This holds for all of the procurement modalities and for all of RSI and integration perceptions, both endline and delta.

Timing of support

Finding 25: There is evidence that gains in RSI endline scores dimmish rapidly with increasing number of days to receive the cash assistance (from the cohort receiving cash within four months of their return (Cash <=4mths)). While other procurement modes showed little impact of days to receipt of assistance on RSI endline scores.

Finding 26: Returnees who received part of their microbusiness support as quick cash (Cash <=4mths) had a smaller average growth in their RSI scores than those who received through in-kind modality, MoMo or Cash >4mths.

Finding 27: There is no significant relationship between the RSI endline scores and the length of time since the receipt of assistance, regardless of modality.

Finding 28: Returnees who have had their microbusiness assistance for longer, have lower growth in their RSI scores.

6.2 Conclusions

RSI Overall

The RSI Overall raises more questions than it answers about the programme in Sudan and why the evaluation results seen here are so different to the other JI geographies included in the evaluation.

The results of the Overall RSI in Sudan sit in stark contrast to the other JI countries. Compared to Ethiopia and Somalia where we see significant increases in RSI scores from baseline to endline, in Sudan there are no significant changes for any cohort of returnees. In fact, the observed level of reintegration for returnees in Sudan has slightly worsened from baseline to endline, with some small differences between the cohorts.

Additionally, without an untreated cohort of returnees it is hard to fully understand whether the supported returnees are less worse off than would have been the case if they had not received support. It could still be the case that the assistance has helped mitigate what would have otherwise been a steeper decline in reintegration scores; which is plausible given that the evaluation period spanned the COVID-19 pandemic and periods of significant political uncertainty and upheaval in Sudan. But without a relevant comparison group there is not enough evidence in Sudan to draw conclusions about the efficacy of the JI interventions.

RSI cohorts and dimensions

The RSI and associated non-migrant calibration do not work the same way in all contexts or across the dimensions contained within the RSI.

As with the Overall RSI we see no consistent signs of improvements to reintegration between the baseline and endline, and no convergence with the non-migrant calibration group. The notion of convergence over time between returnees and non-migrants is therefore not applicable in Sudan. It is possible that there is some reference point bias taking place here. Non-migrants have endured years of instability and perceive their situation as continually dire – compared to those that have recently returned to their communities and perceive this as far better than where they returned from and their (often traumatic) migration experience. There is also a possibility that social desirability bias may be at play here, with both groups of respondents tending to respond to the RSI surveys in ways which they feel are more socially acceptable.

The results we do see confirm the hypothesis that reintegration is complex and multifaceted. Returnees experience reintegration differently, and this is heightened by the different types and modalities of support that they receive. Each modality performs differently overall, suggesting that some dimensions of the RSI are more responsive to the assistance provided.

The RSI contains dimension, and indicators that are more/less directly influenced by IOM's assistance. This highlights an opportunity to improve the RSI for the purpose of assessing programme performance (see Measuring Sustainable Reintegration, another report from the IMPACT project).

The major aspects of JI support focus on providing economic assistance to returnees, and so it is perhaps unsurprising that we see more significant changes in the Economic dimension of the RSI. The RSI indicators are also better aligned with the types of support provided within the Economic dimension that in others, making it more likely that changes would show up.

Conversely, the Social dimension is driven largely by access to local services, which are equivalent for returnees and non-migrants alike, and are unlikely to change in the short term or be influenced in any way by IOM reintegration support activities. Hence it is unsurprising that we see no impacts within the Social dimension of the RSI.

Other reintegration measures

Analysis of alternative measures of reintegration largely confirm the findings and conclusions from the institutional RSI. Namely, that there appears to be no improvement of any kind to the reintegration of returnees over the evaluation period in the context of Sudan. This is particularly interesting given the contrast to the positive stories seen in Ethiopia and Somalia.

The only significant impacts are seen in the Economic dimension, which could again reflect the fact that the major aspects of JI support focus on providing economic assistance. The RSI indicators in this dimension are also more closely related to the actual types of support provided by the JI than the others.

That nothing improved over time could also be a symptom of what else was happening in the country at the time (COVID-19 pandemic, rampant inflation, political instability). But Ethiopia and Somalia also experienced similar periods of instability and turmoil during the period under evaluation.

The alternative measures used highlight some of its shortcomings in terms of extent of convergence between returnees and non-migrants, and the weighting of individual RSI indicators when compared to the drivers of reintegration from alternative RSI definitions including RSI MIMIC and determinants of self-perception of reintegration. And areas for potential improvement could include implementing the methodology originally provided by Samuel Hall for modifying RSI to better reflect local context. This rerating could be guided by the MIMIC analysis, which provides useful detail into what is driving the reintegration scores we see, and as the weightings do not typically correspond well with the key drivers of reintegration.

Microbusiness and JI support

Generally, the JI's assistance was greatly appreciated by the returnees, and it supported their livelihoods. In particular, the microbusiness support provided by the JI is an appropriate and positive intervention in this context.

Evidence from the evaluation confirms that returnees do feel supported by the microbusiness support provided by the JI, and that it is certainly preferable to the alternative of not receiving any support at all. This is particularly the case for returnees who report having a successful microbusiness. However, the picture is less clear for some of the other elements of the support, including the SIYB, which appears to be less valuable than hoped for. This could put into question its relevance to this group of recipients, especially in the context of macroeconomic instability, and the need for quick cash assistance and other forms of support to respond rapidly to specific well-being challenges.

Timing of support

There are no consistent signals in terms of the length of time returnees waited before receiving assistance, or how long they were able to make use of the assistance.

This is likely because there are a range of dynamics and programme implementation factors producing wide variation in return dates, the number of days before microbusiness assistance was received, and hence the number of days returnees had assistance. There may also be microbusiness dynamics operating in different directions for different cohorts of returnees. Returnees with a successful microbusiness appear to improve more consistently over time, whereas other returnees may start their microbusiness and never succeed or have an initial success that wanes. This creates variation in opposing directions resulting in an inability to see any statistically significant signal for both days to and days in receipt of the microbusiness assistance.

7   Technical annex

7.1   The interventions

Shortly after arrival in their country of origin, returnees were intended to be screened by IOM to assess the levels of vulnerability and identify the appropriate types of assistance for each individual returnee. General Reintegration is provided to all returnees regardless of their level of vulnerability and is not tailored to the individual. This contrasts with complimentary reintegration assistance (CRA), which is a discretionary based assistance and to find by the reintegration plan developed with a caseworker through reintegration counselling. Although in practice, almost all of the returnee caseload is eligible for this CRA as well.

Within this report, CRA refers to the following services provided by the JI in Sudan:

- Microbusiness
- Start and Improve Your Business (SIYB) training

7.1.1   Types of support provided

Figure 38 displays the percentages of returnees receiving the different types of JI support, broken down by sample eligibility. It shows that eligible returnees are more likely to receive both types of support.

Additionally, some returnees received post-arrival assistance from the JI to help them cope with the immediate shock of return. For example, small numbers of returnees received support for shelter and onward transportation in Sudan. These types of support are not considered part of the reintegration assistance and so are considered in the following analysis.

Similarly, we do not present an analysis of the community-based reintegration projects. The Natural Experiment report returnees' evidence regarding the contribution they made to their ability to endure and respond to the Covid-linked shock, while this evidence is further taken up and expanded on in the Spot Analytical Report on community-based reintegration projects (CBRPs).
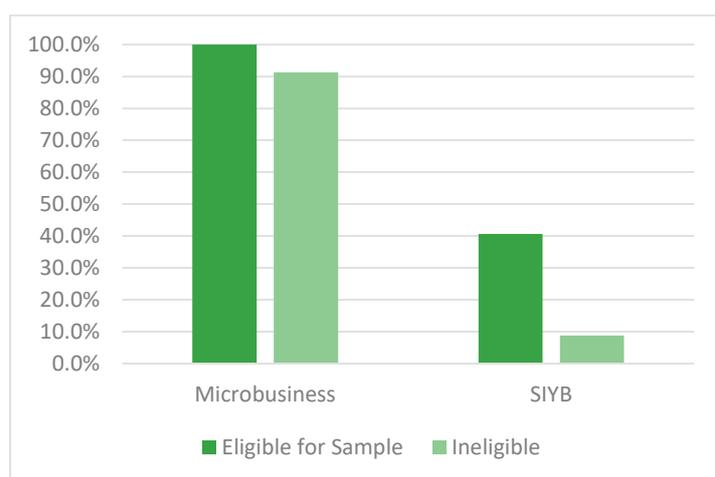
Figure 38 Types of JI support received by the universe of returnees in Sudan, by sample eligibility

7.1.2   Microbusiness support

Two forms of support were offered to returnees in relation to a microbusiness. The first is a form of funding, with the second being a form of training. Table 33 indicates the percentages of all recorded returnees who received each type of microbusiness support. It shows that funding was provided to a

significantly higher proportion of returnees than training. Eligible returnees were also far more likely to participate in the SIYB training than ineligible returnees.

Table 33 Combinations of microbusiness support received by the universe of returnees in Sudan, by eligibility

Type of support received	Eligible	Ineligible	Overall
Microbusiness assistance	100.0%	91.3%	94.2%
Both assistance and SIYB training	40.7%	8.8%	19.3%
Neither assistance nor SIYB training	0.0%	8.7%	5.8%
Total returnees (n)	1,938	3,933	5,871

Table 34 shows the performance status of returnee microbusinesses, against satisfaction with the assistance provided. Overall, two-thirds of returnees (66.0%) were satisfied of very satisfied with the assistance provided, with just 2.2% feeling somewhat or very dissatisfied. This is encouraging given that just 17.6% of microbusinesses were reported as being successful, with returnees commonly reporting satisfaction with the assistance regardless of the performance of their microbusiness.

Table 34 Microbusiness performance with returnee satisfaction with the assistance provided

Performance	Very dissatisfied	Somewhat dissatisfied	Neither	Satisfied	Very satisfied
Closed	0.5% (1)	2.6% (5)	38.3% (75)	45.9% (90)	12.8% (25)
Not started/in preparation	0.5% (1)	3.3% (7)	45.3% (97)	45.8% (98)	5.1% (11)
Struggling	0.0% (0)	0.0% (0)	18.7% (23)	65.9% (81)	15.4% (19)
Successful	0.0% (0)	0.0% (0)	9.6% (11)	64.0% (73)	26.3% (30)

7.2 Sample frame inclusion and selection bias

As discussed in the introduction, the inclusion of returnees in the sample frame for the RSS was based on strict criteria. In this section, we investigate whether there are inherent differences between those included in the sample frame and those who were not. Any differences could highlight potential selection bias, or characteristics of returnees who dropped out of the programme sometime after registration. However, in Sudan, every returnee was considered automatically eligible for CRA and so there is no difference between the eligible and ineligible returnees.
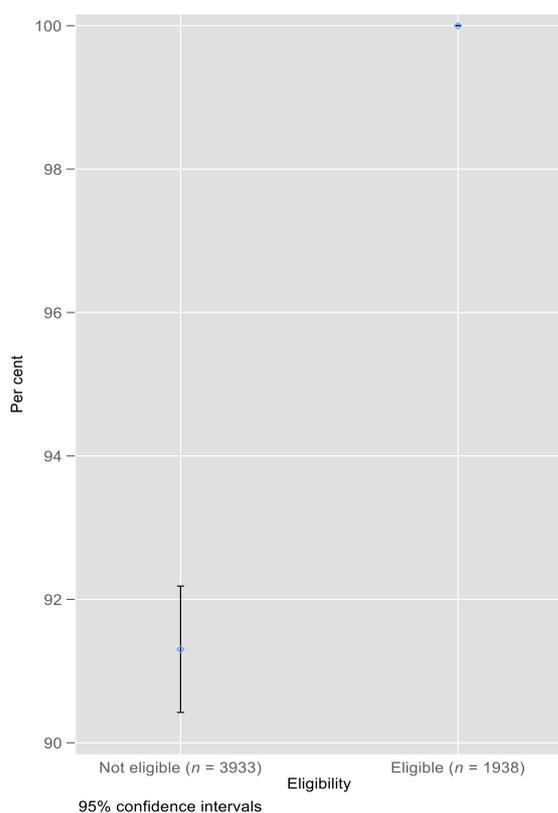
Figure 39 Percent of returnees receiving any type of GRA, by sample frame inclusion

However, as **Figure 39** shows, there are significant differences between the eligible and ineligible returnees when it comes to the actual receipt of CRA. By default, all returnees in the RSS sample frame received some form of CRA, since receipt of microbusiness support was a criterion for inclusion. But the percent of returnees excluded from the sample that received any type of CRA was 91.3% in Sudan.

There is also a clear distinction for microbusiness support between eligible and ineligible returnees, which is expected as this forms part of the inclusion criteria (Table 35). We also see a significant difference in the receipt of SIYB which could be representative of the issue of programme drop-out – since those include in the sample have by definition received at least one type of CRA (microbusiness) they are more likely to retain contact with the programme and receive other types of support.

Among eligible returnees in Sudan the mean number of support types received was 1.4, with a median of one.

We also perform logistic regressions for eligibility to the RSS sample frame as the dependent variable, and returnee characteristics as the explanatory variables. This analysis is performed on all returnees in the universe for which data were available, with additional models for over 18s only and principal applicants only. We find that:

- In Sudan, women are significantly less likely to be included in the sample frame than men, though this effect disappears when the model is restricted to 18+ PAs.

- Likelihood of inclusion in the sample frame increases with age.

- The effects of education on sample frame inclusion are split, with diploma and university educated returnees being more likely to be included in the sample than primary educated, though there is no effect of secondary or religious education.

Table 35 Determinants of sample frame eligibility in Sudan

	Overall universe		18+ PA only	
	Coef	P>z	Coef	P>z
Sex (base = male)				
Female	-0.763	.004	.427	.038
Age	0.020	.000	.024	.000
Route (base = Northern-Af)				
Eastern	-0.377	.733	-.823	.410

	Overall universe		18+ PA only	
	Coef	P>z	Coef	P>z
Education (base = primary)				
Secondary	0.074	.594	-.102	.420
Religious school	-0.174	.505	-.047	.829
Diploma	-1.130	.000	-.730	.001
University	0.533	.007	.405	.024
Constant	-2.582	.000	-2.364	.000
	n=2,775; R²=.023		n=2,599; R²=.024	

Table 36 presents the proportions of returnees receiving the two key types of employment-related interventions (Microbusiness funds, and SIYB training) for both the eligible and ineligible sets of returnees. It shows that returnees included in the sample were more likely to receive both types of support than those being excluded, with the difference also being significant in both cases.

Table 36 Interventions received by the universe of returnees with T-tests for difference, by eligibility

	Percent of eligible returnees	Percent of ineligible returnees	T-test (2-tailed proportion)
Microbusiness funding	100.0%	92.5%	z = -15.49 p =.000
SIYB training	41.0%	7.5%	z = -28.49 p =.000

7.2.1 Sample bias tests and models

Statistical tests and logistic models were also conducted to assess for systematic differences between different groups; Sampled vs Unsampled, the Matched vs Unsampled and the timing of cash payments. The differences assessed included age, location, treatment type, assistance timing and receipt of SIYB training.

Sampled vs unsampled

The first set of models and tests compared all the enumerated returnees from the endline-retro-baseline against the eligible returnee universe obtained from the programme data. The logistical model below presents the odds ratios for being enumerated according to various characteristics.

Table 37 Logistic model of the odds of being enumerated in the RSS

Term	estimate	std error	p-value
Intercept	0.559	0.300	0.053
El Gazira	1.052	0.187	0.786
Khartoum	1.246	0.118	0.062
Kordofan	0.736	0.193	0.112
Other	1.021	0.191	0.915
Age	1.000	0.004	0.937
Sex – male	0.659	0.224	0.062

Term	estimate	std error	p-value
SIYB	1.744	0.098	0.000
Assistance more than 6 months before COVID	0.185	1.040	0.105
MoMo	0.720	0.145	0.024
In-kind modality	2.346	1.069	0.425
Cash over 4 months	1.129	0.129	0.346

PseudoR2 – 0.03

N Returnees – 2079

Table 38 Table of frequencies and statistical test results on the sampled vs unsampled population

Variable	Unsampled	Sampled
Region		
Darfur	49.1% (688)	46.8% (307)
El Gazira	7.6% (108)	7.8% (51)
Khartoum	27.3% (389)	31.4% (206)
Kordofan	8.4% (120)	6.7% (44)
Other	7.5% (107)	7.3% (48)
Chi-Square test result	p =0.305	
Assisstance Timing		
Assistance during/just before covid	91.8% (1307)	95.4% (626)
Assistance more than 6 months before covid	8.2% (116)	4.6% (30)
Chi-Square test result	p = 0.004	
Treatment type		
Cash 4 months or less	18.8% (267)	21.% (143)
Cash over 4 months	40.5% (576)	48.9% (321)
MOMO	33.6% (478)	24.8% (163)
Old Modality	7.2% (102)	4.4% (29)
Chi-Square test result	p < 0.001	
SIYB		
Yes	37.1% (528)	49.8% (327)
No	62.9% (895)	50.2% (329)
Chi-Square test result	p < 0.001	
Sex		
Female	3.8% (54)	6.7% (44)
Male	96.2% (1369)	93.3% (612)
Chi-Square test result	p = 0.005	
Age		
Mean	31.6	32.3
T-test result	p=0.2	

According to both the logistic model and the frequency table, we can see that there is variation within the sample and the population according to location. There are larger concentrations of eligible returnees in both Darfur and Khartoum with these making up roughly 75% of the population. These geo-spatial patterns are similarly reflected in both the sample and the population with no significant variation between the two according to the results of the chi-square test (p = 0.3).

There are no significant variations by age, this is not significant in the logistic model and a test of the means suggests no significant difference. Meanwhile, sex approaches significance within the model where it indicates an underrepresentation of men within the sample. The frequencies show that women were sampled at almost double the concentration they were within the unsampled population. While this is a significant difference, the numbers of women in the sample are still very

low regardless. There is no significant variation by education, each level is makes up a similar proportion in both groups.

There are significant differences according to every facet of assistance. Firstly, there is an oversampling of those receiving their assistance during / just before covid, 95.4% vs 91.8%. This is likely related to the we see in modalities, with MoMo and in-kind modality being significantly under-sampled compared to cash, especially those having to wait to receive to their cash assistance. Additionally, there is a considerable oversampling of those receiving SIYB assistance, while the unsampled have a ratio close to 2:1 in favour of those not receiving SIYB, the final sample brings this to almost exactly 1:1.

Matched returnees vs unsampled returnees

The second set of models and tests compared all the matched enumerated returnees from the endline-retro-baseline versus the eligible returnee universe obtained from the programme data. The enumerated but unmatched returnees are excluded from this analysis. The logistical model below presents the odds ratios for being enumerated according to various characteristics.

Table 39 Logistic model of the odds of being enumerated and matched in the RSS

term	estimate	std error	p-value
Intercept	0.227	0.385	0.000
El Gazira	1.093	0.227	0.697
Khartoum	1.249	0.143	0.120
Kordofan	0.809	0.239	0.375
Other	0.967	0.241	0.889
Age	1.000	0.006	0.952
Sex – male	0.778	0.295	0.395
SIYB	1.416	0.122	0.004
Assistance more than 6 months before Covid	0.256	1.043	0.192
MoMo	1.213	0.184	0.293
In-kind modality	3.307	1.081	0.269
Cash over 4 months	1.399	0.172	0.051

PseudoR2 – 0.01

N Returnees- 1793

Table 40 Table of frequencies and statistical test results on the sampled and Matched vs Unsampled population

Variable	Unsampled	Matched
Region		
Darfur	49.1% (688)	46.8% (173)
El Gazira	7.6% (108)	7.8% (29)
Khartoum	27.3% (389)	31.9% (118)
Kordofan	8.4% (120)	6.8% (25)
Other	7.5% (107)	6.8% (25)
Chi-Square test result	p = 0.438	
Assisstance Timing		
Assistance during/just before covid	91.8% (1307)	93.5% (346)
Assistance more than 6 months before covid	8.2% (116)	6.5% (24)
Chi-Square test result	p = 0.334	
Treatment type		
Cash 4 months or less	18.8% (267)	16.2% (60)
Cash over 4 months	40.5% (576)	45.4% (168)
MOMO	33.6% (478)	32.3% (119)
Old Modality	7.2% (102)	6.2% (23)
Chi-Square test result	p = 0.344	
SIYB		
Yes	37.1% (528)	44.6% (165)
No	62.9% (895)	55.4% (205)
Chi-Square test result	p = 0.01	
Sex		
Female	3.8% (54)	4.9% (18)
Male	96.2% (1369)	95.1% (352)
Chi-Square test result	p = 0.432	
Age		
Mean	31.6	31.7
T-test result	p = 0.88	

The same location patterns are observed between these two groups as previously seen in the sampled vs unsampled. This time the two groups are even more statistically similar (p = 0.44). Again, there are no significant age differences, moreover the means between the two groups are now close to identical, a difference of only 0.1 years. The oversampling of women is now not significant; therefore the matched sample has a similar sex distribution as the unsampled population.

Similarly, the patterns in assistance type and timing have become non-significant amongst the matched returnees. There is less than 2% difference between the samples regarding the timing of their assistance relative to COVID-19. While the significant under-sampling of MoMo has been almost completely reversed. The oversampling of those receiving SIYB remains but is less than compared to the Overall returnee sample.

Cash 4 months or less vs Cash over 4 months

The final set of models and tests compared amongst the matched returnees by the two different cash timings. The logistical model below presents the odds ratios of receiving cash payment in 4 months or less (120 days) according to various characteristics.

There are similar patterns in the location of the returnees as seen in both previous comparisons and once again there is not a significant difference between the two cash timing groups. There is also no statistically significant difference between the groups in regards to receipt of SIYB training, as seen by the insignificant model term (Table 41) and the chi-square result in Table 42.

Table 41 Logistic model of the odds of receiving cash in 4 months or less (Matched only)

Term	estimate	std error	p-value
Intercept	1.083	1.012	0.937
El Gazira	1.209	0.633	0.764
Khartoum	0.730	0.468	0.501
Kordofan	2.558	0.543	0.083
Other	3.125	0.668	0.088
Age	1.016	0.016	0.325
Sex – Male	0.201	0.629	0.011
SIYB	1.068	0.337	0.845
Primary/Religious School	0.649	0.515	0.402
High School	0.662	0.532	0.439
University	0.901	0.654	0.874

PseudoR2 – 0.07

N Returnees – 228

However there is a difference by sex, with women more likely to receive their cash quickly. Though this should be caveated given the very small numbers of women in the sample for Sudan. Finally those receiving their cash sooner also were older on average by about 3.5 years. This is corroborated by the density plot in Figure 40 which shows an upwards shift in the age distribution relative to those waiting longer for their cash to be received.

Table 42 Table of frequencies and statistical test results on the two different cash payment timings

| Variable	Cash over 4 months	Cash under 4 months
Region		
Darfur	52.4% (88)	40.0% (24)
El Gazira	7.7% (13)	6.7% (4)
Khartoum	29.8% (50)	30.0% (18)
Kordofan	6.5% (11)	13.3%(8)
Other	3.6% (6)	10.0% (6)
Chi-Square test result	p = 0.118	
SIYB		
Yes	57.1% (96)	51.7% (31)
No	42.9% (72)	48.3% (29)
Chi-Square test result	p = 0.561	
Sex		
Female	4.2% (6)	16.7% (10)
Male	95.8% (161)	83.3% (50)
Chi-Square test result	p = 0.004	
Age		
Mean	31.7	35
T-test result	p = 0.042	
Education		
None	11.9% (20)	15.3% (9)
Primary/Religious	38.7% (65)	35.6% (21)
Secondary	37.5% (63)	33.0% (20)
Vocational Training	0.0% (0)	1.7% (1)
University	11.9% (20)	13.6% (8)
Fisher test result	p = 0.516	
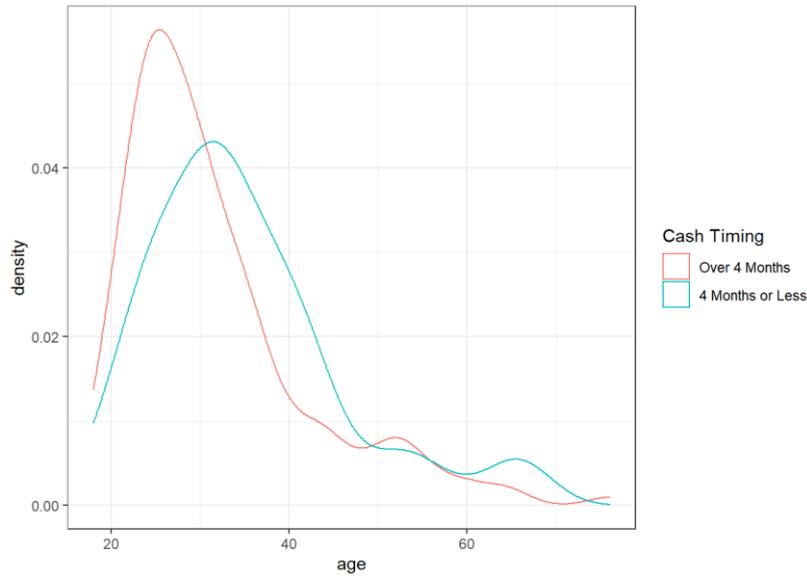
Figure 40 Kernel density plot of age by cash payment timing

7.3 **RSS questionnaire**

The table below contains the core RSS questions that are used for compiling the RSI and which formed the key parts of the analysis in this report. The full survey is provided as a separate annex.

Variable	Question	Choices
Section name	**Economic dimension**	
Rs_econ_1	**1. How satisfied are you with your current economic situation?**	[very_satisfied] Very Satisfied [satisfied] Satisfied [neutral] Neutral [dissatisfied] Dissatisfied [very_dissatisfied] Very Dissatisfied [dont_wish_to_answer] I don't wish to answer
Rs_econ_2	**2. How often have you had to reduce the quantity or quality of food you eat because of its cost?**	[very_often] Very often [often] Often [sometimes] Sometimes [rarely] Rarely [never] Never [dont_wish_to_answer] I don't wish to answer
Rs_econ_3	**3. Are you able to borrow money if you need it?** **(Perceived availability of credit, regardless of source – bank, family, friends, traditional loans system, microcredit, etc. – and regardless of whether respondent is effectively taking out loans or not)**	[yes] Yes [no] No [dont_know] I don't know [dont_wish_to_answer] I don't wish to answer
Rs_econ_4	**4. Do you borrow money? How frequently?** **(Behaviour self-reported by respondent, regardless of source of credit and amount – even very small amounts count)**	[very_often] Very often [often] Often [sometimes] Sometimes [rarely] Rarely [never] Never [dont_wish_to_answer] I don't wish to answer
Rs_econ_5	**5. On average, which amount is bigger: your spending every month, or your debt?**	[debt_is_larger] Debt is larger [spending_is_larger] Spending is larger [dont_wish_to_answer] I don't wish to answer [n_a_debt] N/A
Rs_econ_6	**6. How would you rate your access to opportunities (employment and training)?**	[very_good] Very good [good] Good [fair] Fair [poor] Poor [very_poor] Very poor [dont_know] I don't know [dont_wish_to_answer] I don't wish to answer
Rs_econ_7	**7. Do you currently work?** **(Either employment-formal or informal; self-employment; own business or farm. If respondent is currently in unpaid training or attending school, then select "Not Applicable".)**	[1] Yes [0] No [98] I don't know [99] I don't wish to answer [100] Not applicable

Variable	Question	Choices
Rs_econ_8	**8. Do you own any of the following productive assets?**	[no_assets] No assets owned [land] Land [animals] Animals [trees] Trees (fruits, nuts, etc.) [buildings_and_structures] Buildings and Structures [vehicles] Vehicles [equipment_and_tools] Equipment and Tools [iom_assets] Assets received from IOM [other] Other (please specify) [dont_know] I don't know [not_answered] I don't wish to answer
Rs_econ_10	**10. Why are you currently looking for a job?**	[unemployed] Unemployed [unhappy_with_job] Unhappy with work at current job [unhappy_with_conditions] Unhappy with work conditions (location, working hours, etc.) [unhappy_with_pay] Unhappy with salary at current job [other] Other (please specify)
Section name	**Social dimension**	
Rs_soc_11	**11. How would you rate your access to housing in your community?**	[very_good] Very good [good] Good [fair] Fair [poor] Poor [very_poor] Very poor [dont_know] I don't know [dont_wish_to_answer] I don't wish to answer
Rs_soc_12	**12. How would you rate the standard of housing you live in today?**	[very_good] Very good [good] Good [fair] Fair [poor] Poor [very_poor] Very poor [dont_know] I don't know [dont_wish_to_answer] I don't wish to answer
Rs_soc_13	**13. How would you rate the access to education in your community?**	[very_good] Very good [good] Good [fair] Fair [poor] Poor [very_poor] Very poor [dont_know] I don't know [dont_wish_to_answer] I don't wish to answer
Rs_soc_14	**14. Are all school-aged children in your household currently attending school? (This includes children to whom respondent is a parent or guardian, as well as other children in respondents' household.)**	[yes] Yes [no] No – some but not all [none] None [dont_wish_to_answer] I don't wish to answer

Variable	Question	Choices
Rs_soc_15	**15. How would you rate the access to justice and law enforcement in your community?** **(courts, police, military, etc.)**	[very_good] Very good [good] Good [fair] Fair [poor] Poor [very_poor] Very poor [dont_know] I don't know [dont_wish_to_answer] I don't wish to answer
Rs_soc_16	**16. Do you have at least one identification document?** **(passport, national, or local identification document, birth certificate, etc.)**	[1] Yes [0] No [98] I don't know [99] I don't wish to answer
Rs_soc_17	**17. How would you rate the access to documentation (personal ID, birth certificates, etc.) in your community?**	[very_good] Very good [good] Good [fair] Fair [poor] Poor [very_poor] Very poor [dont_know] I don't know [dont_wish_to_answer] I don't wish to answer
Rs_soc_18	**18. How would you rate the access to safe drinking water in your community?**	[very_good] Very good [good] Good [fair] Fair [poor] Poor [very_poor] Very poor [dont_know] I don't know [dont_wish_to_answer] I don't wish to answer
Rs_soc_19	**19. How would you rate the access to healthcare in your community?**	[very_good] Very good [good] Good [fair] Fair [poor] Poor [very_poor] Very poor [dont_know] I don't know [dont_wish_to_answer] I don't wish to answer
Rs_soc_20	**20. What is the quality of healthcare available to you?**	[very_good] Very good [good] Good [fair] Fair [poor] Poor [very_poor] Very poor [dont_know] I don't know [dont_wish_to_answer] I don't wish to answer
Section name	**Psychosocial dimension**	
Rs_pss_22	**22. How often are you invited or do you participate in social activities (celebrations, weddings, other events) within your community?**	[very_often] Very often [often] Often [sometimes] Sometimes [rarely] Rarely [never] Never [dont_wish_to_answer] I don't wish to answer

Variable	Question	Choices
Rs_pss_23	**23. How do you feel about your support network? Can you rely on the network's support?** **(Support network which can provide emotional or practical help in time of need, regardless of factual type/size/strength of support)**	[very_good] Very good – a very strong network [good] Good [fair] Fair [bad] Bad [very_bad] Very bad – a very weak network [dont_know] I don't know [dont_wish_to_answer] I don't wish to answer
Rs_pss_23a	**23a. Are there people from within the community where you currently reside that you or your household members ask for advice and/or information?**	[1] Yes [0] No [98] I don't know [99] I don't wish to answer
Rs_pss_23b	**23b. Are there people from within the community where you currently reside that ask you or your household members for advice and/or information?**	[1] Yes [0] No [98] I don't know [99] I don't wish to answer
Rs_pss_24	**24. Do you feel you are part of the community where you currently live?**	[i_agree] I agree – I feel strongly that I am part of the community [i_somewhat_agree] I somewhat agree [dont_agree_or_disagree] I don't agree or disagree [i_somewhat_disagree] I somewhat disagree [i_strongly_disagree] I strongly disagree – I don't feel part of the community at all [dont_know] I don't know [dont_wish_to_answer] I don't wish to answer
Rs_pss_25	**25. How physically safe do you feel for yourself and your family during everyday activities outside?** **(Perceived physical safety from violence and persecution and/or other forms of insecurity. May be related to belonging to a social group or to the status of returnee alone.)**	[i_feel_very_safe_all_the_time] I feel very safe all the time [i_feel_safe_most_of_the_time] I feel safe most of the time [neutral] Neutral [i_feel_unsafe_most_of_the_time] I feel unsafe most of the time [i_feel_very_unsafe_all_the_time] I feel very unsafe all the time [dont_wish_to_answer] I don't wish to answer
Rs_pss_26	**26. How frequently have you experienced important tensions or conflicts between you and your family since you returned?**	[very_often] Very often [often] Often [sometimes] Sometimes [rarely] Rarely [never] Never [dont_wish_to_answer] I don't wish to answer
Rs_pss_27	**27. Have you felt discriminated since your return?** **Definition: discrimination entails inability to enjoy rights and freedoms without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status**	[never] Never discriminated [only_rarely] Only rarely discriminated [sometimes] Sometimes discriminated [very_often] Very often discriminated [dont_wish_to_answer] I don't wish to answer

Variable	Question	Choices
Rs_pss_28	**28. Do you often suffer from any of the following?** **- Feeling angry** **- Feeling sad** **- Feeling afraid** **- Feeling stressed** **- Feeling lonely** **- Feeling low self-worth** **- Difficulty concentrating**	[very_often] Very often [often] Often [sometimes] Sometimes [rarely] Rarely [never] Never [dont_wish_to_answer] I don't wish to answer
Rs_pss_29	**29. Would you wish to receive specialised psychological support?**	[1] Yes [0] No [98] I don't know [99] I don't wish to answer
Rs_pss_30	**30. Do you feel that you are able to stay and live in this country?**	[1] Yes [0] No [98] I don't know [99] I don't wish to answer
Rs_pss_30a_reint	**30a If you consider reintegration to include your economic, social and psychosocial/mental well-being, how well DO you currently feel you are reintegrated into this community?**	[not_integrated] Not at all integrated [Somewhat_integrated] Somewhat integrated [ok_integration] Okay level of integration [verygood_integration] Very good level of integration [fully_integrated] Feel fully integrated [dont_know] I don't know [not_answered] I do not wish to answer
Rs_pss_31a	**31a. On a scale from 1 to 5, how likely are you to migrate again?**	[5] 5-Very likely [4] 4-Somewhat likely [3] 3-Do not know at this point [2] 2-Somewhat unlikely [1] 1-Very unlikely [98] I do not wish to answer

7.4 Ease of recall for retro-baseline respondents

The general view is that retrospective data is more unreliable and tends to report a more negative recollection than contemporaneous data. However, the challenges of acquiring good historical data through retrospective enumeration has been reviewed recently by Denison,[16] with the empirical evidence to date showing a mixed picture. Retrospective enumeration has been found to result in rosy retrospection, euphoric recall and egocentric bias, the last being where individuals overestimate their own incomes in hindsight. Denison's literature review also indicates that recalled answers can display reasonable correspondence to contemporaneous assessment for recall within five years or less. But the delta between the two increased with the cognitive complexity and demand of the questions. Smith and Thomas[17] conclude that reliable retrospective information can be collected on events that people remember, suggesting a recall period of two years or less, and linking questions to other significant events in the respondent's life. For returnees, their return from migration should be such a significant anchoring event adding some support to the validity of returnee retrospective enumeration.

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[16] Denison, J. (2022). Using Retrospective Survey Measurement in Assessing Migrant Reintegration: Evidence from IOM programmes in Ethiopia, Somalia, and Sudan, available at https://returnandreintegration.iom.int/en/resources/study/using-retrospective-survey-measurement-assessing-migrant-reintegration-evidence-iom
[17] Smith and Thomas (2003: 47).

On the other hand, non-migrants are very unlikely to have a similar significant anchoring event at the two-month period after the return of their corresponding matched returnee. Raising the prospect that non-migrants may be less reliable at recalling perceptions and situations without this significant anchoring event. Denison conducted analysis of the partial endline-retro-baseline returnee data without any non-migrants, but not with the restrictions applied in this analysis, i.e. principal applicant, over 18, arriving between 2018 Q3 and 2021 Q2. The main conclusion of Denison's analysis was that those who find it difficult to recall retrospective questions were more likely to have a lower retro-baseline RSI score. In analysing the determinants of difficulty of recall, being enumerated by telephone as opposed to face-to-face significantly increased a returnee's likelihood of citing difficulty recalling retro-baseline questions.

The frequency of returnees and non-migrants in these three categories of recall is presented in Table 43.

Table 43 All returnees and matched returnee-non-migrants who completed the endline-retro-baseline RSS+ disaggregated by ease of recall category.

Recall Category	Returnees		Matched returnees		Matched non-migrants	
	N	%	N	%	N	%
Difficult to remember	8	1.22%	5	1.35%	24	6.5%
Neutral remember	95	14.48%	51	13.78%	85	22.9%
Easy to remember	553	84.30%	314	84.86%	258	69.5%
Don't know	1	0.15%	1	0.27%	4	1.1%
Total	**656**	**100%**	**370**	**100%**	**371**	**100%**

All of the returnees and non-migrants that responded to the endline-retro-baseline RSS are presented in Figure 41 and Table 44. Firstly, we would not expect retro-baseline recall ease to affect the contemporaneous endline results. While these analytical cohorts naturally emerged, the resulting significant difference between the Overall RSI endline observations for returnees suggest there is some bias in endline scores that may be driven by other returnee characteristics. The neutral cohort returnees exhibit significantly lower retro-baseline and endline scores than the larger easy recall cohort. The very large confidence intervals associated with the difficult to recall cohort are as a result of only five matched returnees indicating that the retro-baseline recall was difficult, which contrasts with a higher number of non-migrants (24, 6.5%). This is in line with our expectation that non-migrants did not have the anchoring event of return from migration to base their recall on and therefore were more likely to find it difficult to recall a specific time that held no particular significance to them.

The easy recall returnee cohort returned a significantly higher retro-baseline score compared to the neutral cohort (Table 40), but the retro-baseline value appears anchored to the endline value, so there is less strong evidence of recall driving the retro-baseline score differences (Figure 41).

Finding 1: Returnees that indicated recall ease had a significantly higher average retro-baseline Overall RSI scores compared to the natural recall category but given the lack of trend in the Overall RSIs, this may not be related to ease of recall. Non-migrants did not exhibit any significant differences between retro-baseline Overall RSI scores.
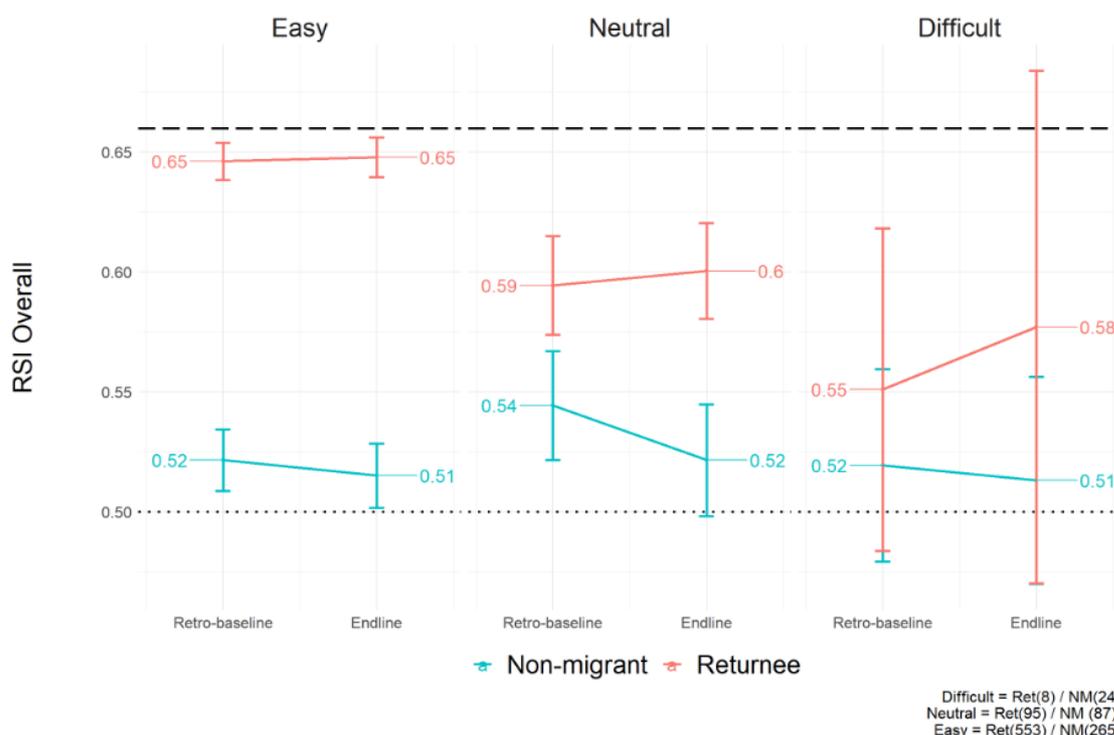
Figure 41 Retro-baseline and endline Overall RSI scores for all returnees and non-migrants disaggregated by ease of recall cohorts. All enumerated returnees and non-migrants are included

Table 44 DID analysis for returnees and non-migrants of Overall RSI by the ease of recall categories.
Reference values = retro-baseline, neutral ease of recall. N difficult returnee 34, non-migrant 139, neutral returnee 27 non-migrant 79, easy returnee 470 non-migrant 103

term (Returnees)	estimate	std.error	statistic	p.value
Intercept	0.59	0.01	59.71	0.00
Endline	0.01	0.01	0.43	0.67
Easy	0.05	0.01	4.81	0.00
Difficult	-0.04	0.04	-1.22	0.22
DID - Endline X Easy	-0.00	0.02	-0.28	0.78
DID - Endline X Difficult	0.02	0.05	0.40	0.69

term (Non-Migrants)	estimate	std.error	statistic	p.value
Intercept	0.54	0.01	46.96	0.00
Endline	-0.02	0.02	-1.39	0.16
Easy	-0.02	0.01	-1.70	0.09
Difficult	-0.02	0.02	-1.00	0.32
DID - Endline X Easy	0.02	0.02	0.86	0.39
DID - Endline X Difficult	0.02	0.04	0.47	0.64

Finding 2: Returnees that indicated recall ease had a significantly higher average retro-baseline reintegration perception scores compared to the neutral recall category but given the lack of trend in the reintegration perception scores this may not be related to ease of recall. Returnees with difficult recall a significantly lower retro-baseline. Non-migrants did not exhibit any significant differences between retro-baseline integration perception scores.

When considering the case of self-re-/integration scores, we see a slightly different pattern between easy and neutral recall cohorts among the returnees. Figure 42 and Table 45 presents the same analysis, only this time for self-perception of re-/integration. Once again, we find that those

returnees citing recall being easy have a significantly higher retro-baseline reintegration perception score. But we also see that there is no trend within this easy recall cohort between retro-baseline and endline.
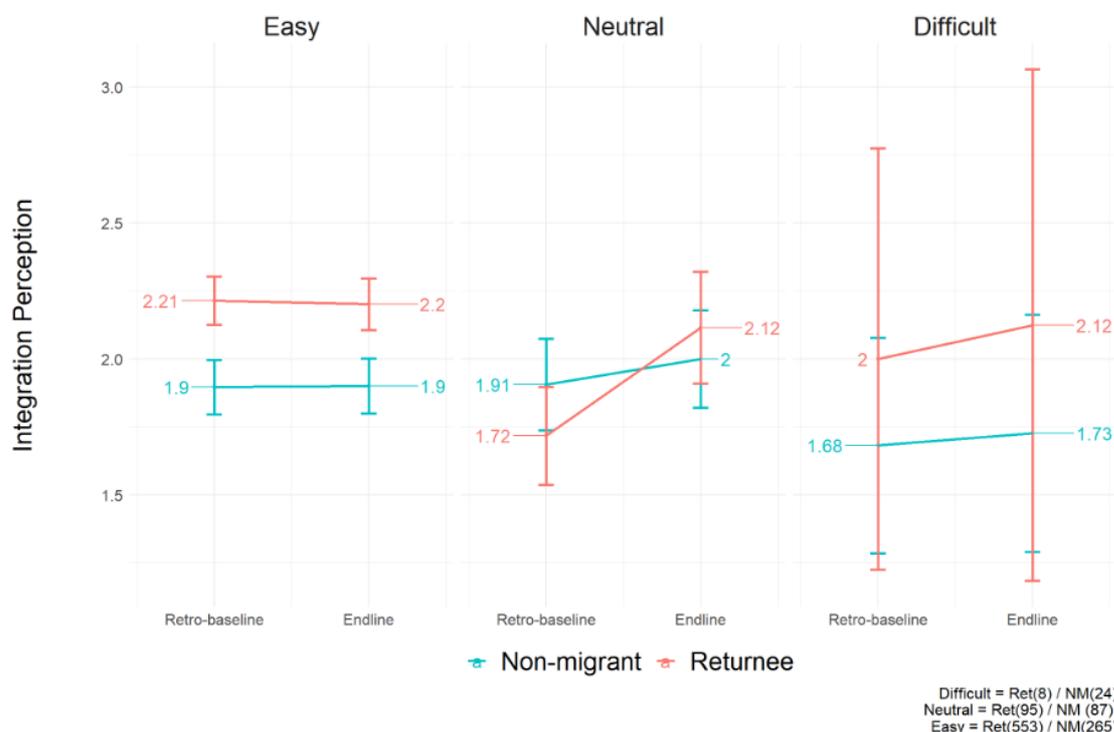

Figure 42 Retro-baseline and endline Self re-/integration scores for all returnees and non-migrants disaggregated by ease of recall cohorts. All enumerated returnees and non-migrants are included

Table 45 DID analysis for returnees and non-migrants of re-/integration perception scores by the ease of recall categories Reference values = retro-baseline, neutral ease of recall. N difficult: returnee 8, non-migrant 24, neutral: returnee 95 non-migrant 85, easy :returnee 553 non-migrant 258

term (Returnees)	estimate	std.error	statistic	p.value
Intercept	1.72	0.11	15.32	0.00
Endline	0.40	0.16	2.53	0.01
Easy	0.50	0.12	4.11	0.00
Difficult	0.28	0.40	0.71	0.48
DID - Endline X Easy	-0.41	0.17	-2.42	0.02
DID - Endline X Difficult	-0.27	0.56	-0.49	0.63
term (Non-Migrants)	estimate	std.error	statistic	p.value
Intercept	1.91	0.09	21.16	0.00
Endline	0.09	0.13	0.74	0.46
Easy	-0.01	0.10	-0.09	0.93
Difficult	-0.22	0.20	-1.13	0.26
DID - Endline X Easy	-0.09	0.15	-0.61	0.54
DID - Endline X Difficult	-0.05	0.28	-0.17	0.86

This could be due to one of two phenomena. Either there really is no change between the two time periods; or the retro-baseline perception is highly primed by the contemporaneous endline perception. With the current data available we have no basis for determining which.

Non-migrants on the other hand, report significant the lower easy and difficult recall retro-baseline scores compared to neutral recall (Table 45).

In summary, these data indicate that there are likely systematic differences between those that find recall easy as opposed to those finding it neutral. Moreover, there is some indication that those who find it difficult are associated with a lower retro-baseline, although the number of observations is too small to be very confident despite the apparent statistical significance.

Determinants of ease of recall-difficult for all returnees and non-migrants was undertaken (**Error! Reference source not found.**).

Finding 3: Difficulty of recall was statistically significantly less likely to be experienced by returnees than non-migrants, but no other demographic characteristics were predictive of ease of recall.

The only other indicated that had a p-value just outside the significance level (p-value = 0.069) was the inverse of Frequency of experiencing signs of distress. This indicates that those respondents experiencing a higher Frequency of signs of distress were less likely to indicate difficulty in recalling retro-baseline responses.

The number of days since baseline was not associated with an increased likelihood of reporting difficulty in recall (odds ratio = 1.000, p-value =0.974). As expected, returnees were less likely to report difficulty in recall than non-migrants (Odds Ratio = 0.224, p-value = 0.004 **Error! Reference source not found.**).

Table 46 Determinants of ease of recall-difficult for all returnees and non-migrants. Reference values = female, no schooling

term	Odds Ratio	p.value
Intercept	0.235	0.307
Age	1.010	0.578
Sex - Male	0.698	0.598
Days since baseline	1.000	0.974
RS PSS 28 (Frequency of experiencing signs of distress inverse)	0.775	0.069
Primary/Religous School	0.564	0.496
High School	0.603	0.539
Vocational Training	0.867	0.914
University	0.874	0.872
Phone Interview	0.786	0.664
Returnee	0.224	0.004

Pseudo R2 = 0.1

N = Ret(655) / NM (361)

7.4.1 Panel contemporaneous baseline and retro-baseline comparison

Without panel observations of contemporaneous baseline and retro-baseline, it is impossible unambiguously determine the degree of bias associated with the retro-baseline enumeration compared to the values from a contemporaneous baseline. Sudan is unique in the three country data in that there are contemporaneous baseline and retro-baseline observations on the same returnees and the same non-migrants, albeit small numbers. Samples are incredibly small, and were not collected by design, but rather an artefact of the evolution of the progressive implementation of endline-retro-baseline RSSs which were extended to non-migrant s after initially only being implemented for returnees. The initial restriction to only enumerate returnees with the endline-retro-baseline instrument was that it was felt they had a reasonable chance of anchoring their retro-baseline responses because return to their country of origin was a significant memorable event and time as opposed to corresponding non-migrants that were unlikely to have such a similar significant event on which to anchor their retro-baseline perceptions and responses.

These observations came about as a result of a change of enumeration strategy from contemporaneous baseline followed by endline to just enumerating endline-retro-baseline, resulting in 21 returnees and 18 non-migrants for which and retro-baseline RSS + enumerations were enumerated. Figure 43 presents the Overall RSIs from the three observations on panel returnees; two estimates of baseline Overall RSI (contemporaneous and retro-baseline) and a single estimate for endline Overall RSI. Reassuringly, the contemporaneous and the retro-baseline return almost identical average scores for the 21 returnees. Considering the kernel density distribution of the 21 returnees (Figure 44), while the mean baseline score between the contemporaneous and the retro is very similar, there are differences in the distribution of scores, that to some extent average out to little aggregate difference. Whereas for the cohort of 18 non-migrants, there is a much greater numerical difference between the contemporaneous and retro-baseline Overall RSIs, with contemporaneous baseline returning Overall RSI of 0.63 compared to 0.57 for the retro-baseline. Similarly, the kernel density diagram (Figure 45) indicates a greater visual difference in the density distribution than seen in the returnees, with a more generalised shift to the right for the contemporaneous baseline. Certainly on the aggregate level this finding matches our anticipated challenge of enumerating the baseline with non-migrants through retrospective questions, because they lack a consistent and significant anchoring event to use to attempt to recall retro-baseline values for all of the RSS + questions at the time after the corresponding returnee had been in-country for about two months.

The limited data presented in Figure 43 supports this hypothesis, albeit without sufficient sample size to result in any statistically significant differences between the contemporaneous and the retro-baseline Overall RSIs.
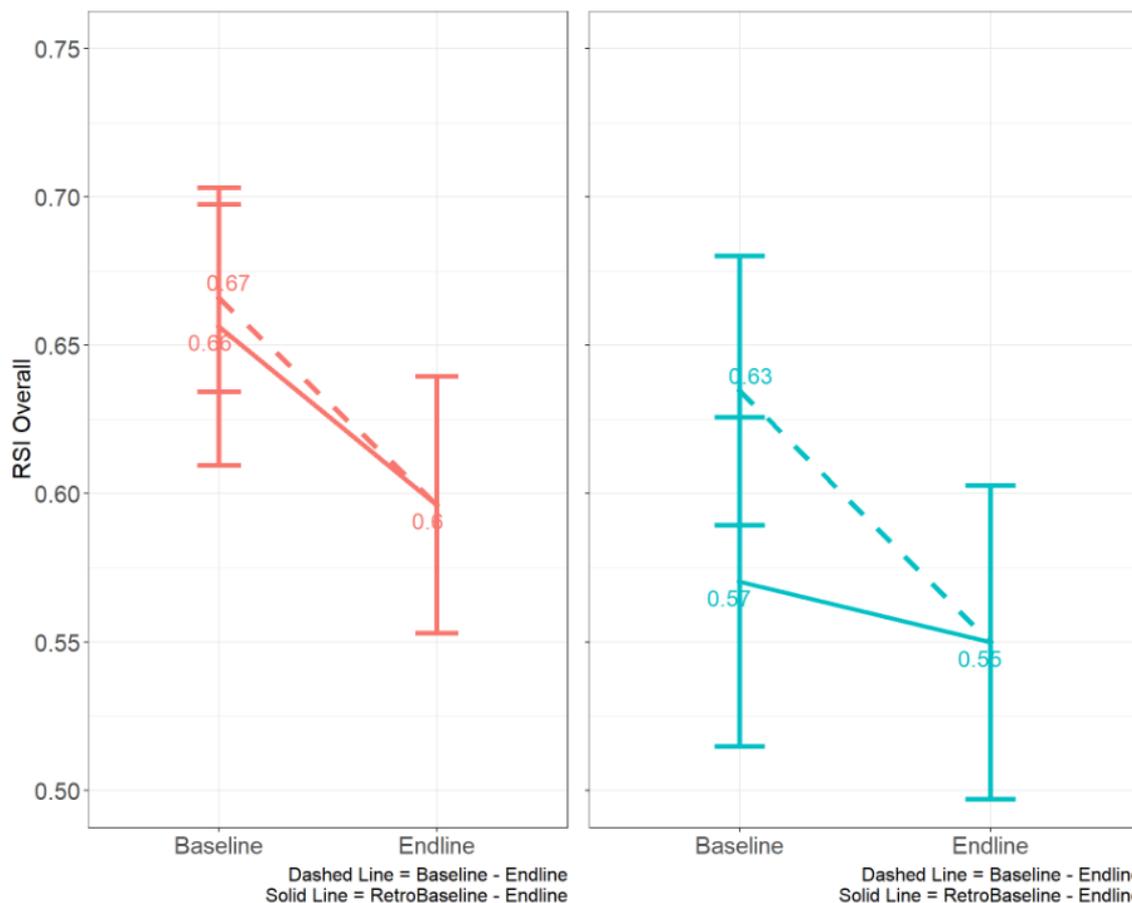

Figure 43 RSI Overall from both contemporaneous baseline as well as endline-retro-baseline for the same 21 returnees (left); and the same 18 non-migrants (right)
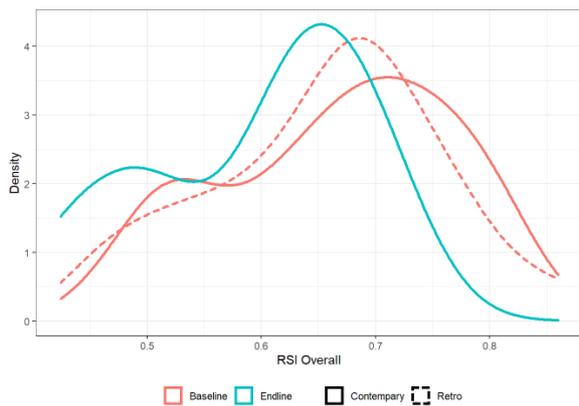
Figure 44 RSI Overall from both contemporaneous baseline and endline-retro-baseline for the same 21 returnees
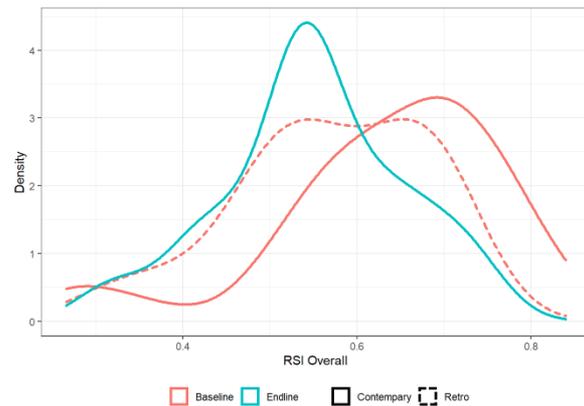
Figure 45 RSI Overall from both contemporaneous baseline and endline-retro-baseline for the same 18 non-migrants

This analysis is repeated for the same cohorts, but with the outcome variable as the PSS dimension of the RSS (Figure 46). In this instance, the returnees return a larger, but non-statistically significant different reference between the contemporaneous and the retro-baseline than is observed in RSI Overall. But the contemporaneous retro-baseline rank for returnees has changed, with the RSI PSS for the retro-baseline returning a numerically greater value than the contemporaneous value (Figure 43 & Figure 46). Perhaps indicating that perceptions are much harder to recall than more objective aspects of their previous retro-baseline condition, such as quality of housing ease of accessing healthcare, inter-alia. Once again non-migrants return larger average differences in the Psychosocial dimension at baseline and retro-baseline, but with the opposite rank at endline to the returnees, i.e. contemporaneous baseline average was numerically greater than the retro-baseline. When looking at the kernel density distributions, it is notable that the non-migrant distributions for endline and retro-baseline appear very similar. This suggests that there may be a priming effect of asking the endline question first followed by the retro-baseline, resulting in non-migrants offering a retro-baseline response heavily influenced by answer they just given for the contemporaneous. This is seen in the kernel density diagram Figure 48, where the will endline and the red dotted retro-baseline of very similar, especially when contrasted with the contemporaneous baseline. Again an unsurprising result, but one that does challenge the one of retro-endline enumeration for non-migrants, albeit with very small numbers of observations.
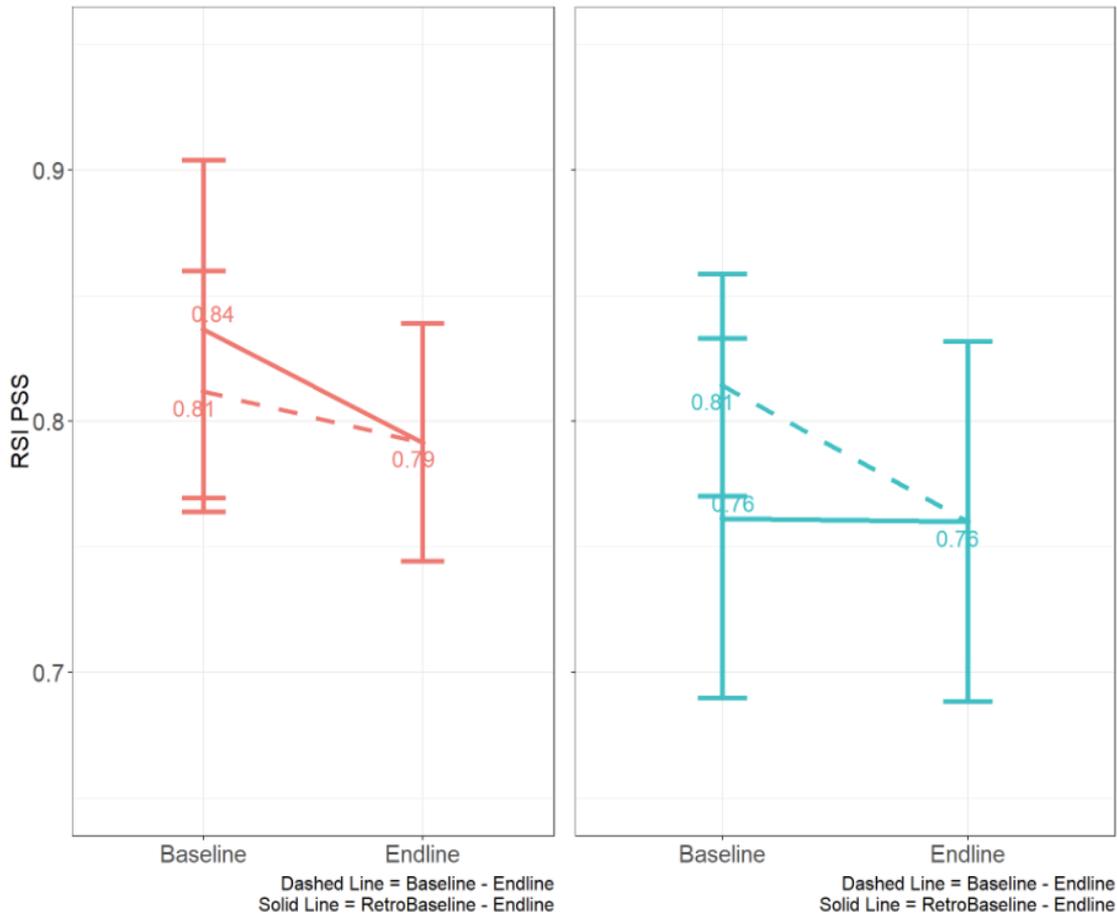
Figure 46 RSI PSS from both contemporaneous baseline as well as endline-retro-baseline for the same 21 returnees (left); and the same 18 non-migrants (right)
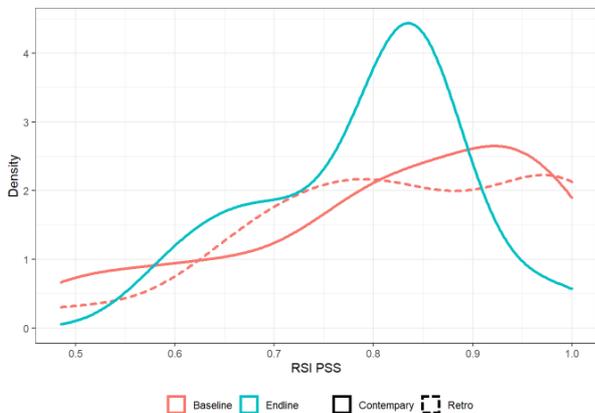

Figure 47 RSI PSS from both contemporaneous baseline and endline-retro-baseline for the same 21 returnees
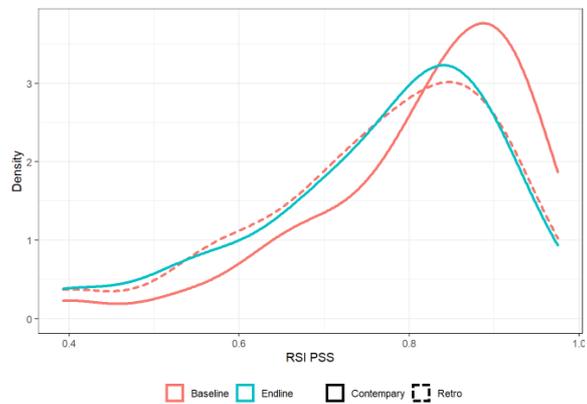
Figure 48 RSI PSS from both contemporaneous baseline and endline-retro-baseline for the same 18 non-migrants

This final analysis is repeated for the same cohorts but this time the outcome variable is re-/integration perception scores (Figure 49). In this instance, the returnees return a much larger difference between the contemporaneous and the retro-baseline than is observed in the 18 non-migrants.
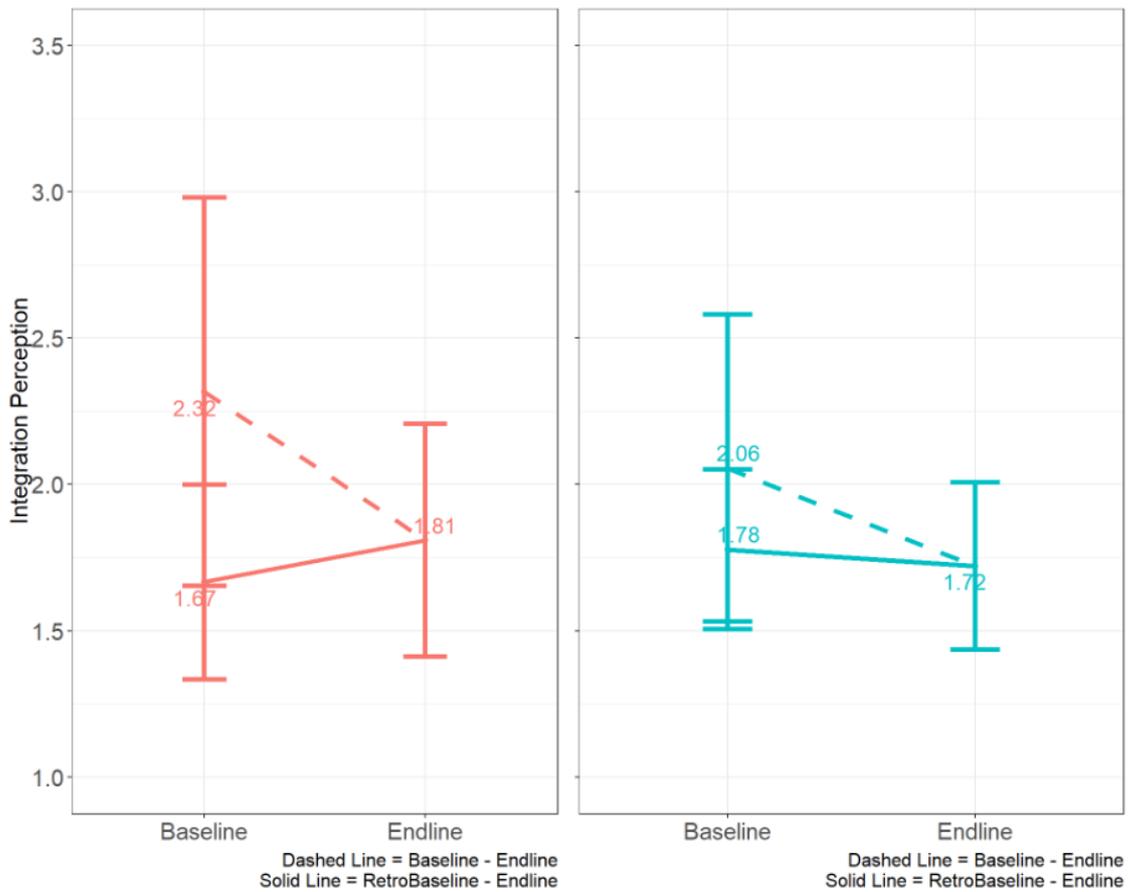
Figure 49 Re-/integration self-perceptions scores from both contemporaneous baseline as well as endline-retro-baseline for the same 21 returnees (left); and the same 18 non-migrants (right)

Reviewing the kernel density diagrams for returnees (Figure 50) and non-migrants (Figure 51), indicated striking coincidence in the distribution for the retro-baseline and endline in the case of non-migrant s, which is not apparent for returnees, where the distributions of endline and retro-baseline are quite distinct. With non-migrant s not having a relevant significant anchoring event to base their recall on, they may be more vulnerable to the priming effect of having just answered the question for the contemporaneous endline that precedes the retro-baseline question. For any future enumerations of non-migrants with an endline-retro-baseline questionnaire could randomly assign the order of questions for that individual enumeration endline first followed by retro-baseline, and vice versa. With 50% of the sample non-migrant answering endline first and the other 50% answering retro-baseline first it would be interesting to see if this in any consistent differences between the resulting scores. While this would test for the priming effect of the endline it is unlikely to resolve the challenge of non-migrant recall without a significant anchoring event.
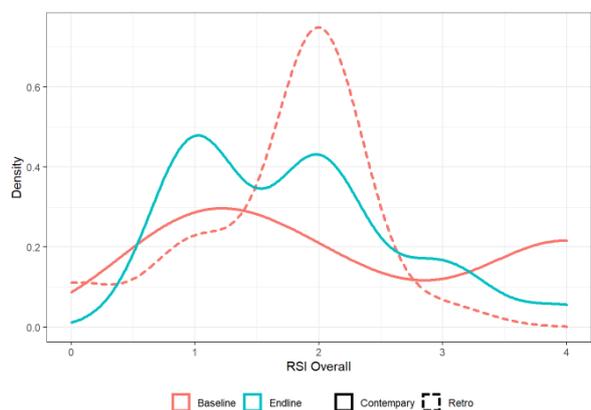
Figure 50 Re-/integration scores from both contemporaneous baseline and endline-retro-baseline for the same 21 returnees
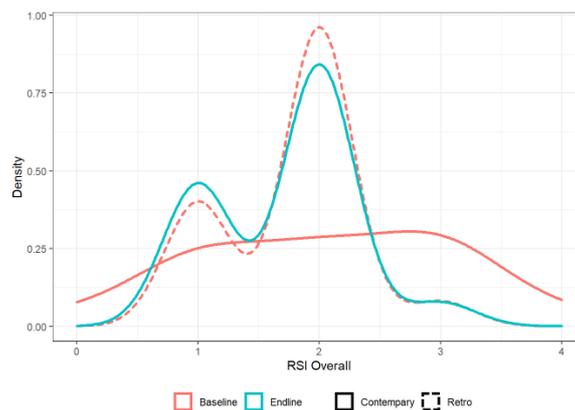
Figure 51 Re-/integration scores from both contemporaneous baseline and endline-retro-baseline for the same 18 non-migrants.

Returnees may well have had greater expectations when returning to Sudan than were actually realised, which is a plausible explanation of the shift left when comparing retro-baseline and contemporaneous baseline distribution densities. That is, returnees may have been disappointed at the endline observation with the reality of the level of support, resulting in a downgrading of their retro-baseline perception score. This effect may apply to other contexts and countries implementing similar returnee reintegration programmes, but the particular social, political and economic challenges and deteriorating conditions experienced over the observation period in Sudan would only go to exacerbate likely differences between a contemporaneous and a retro-baseline enumeration, and this may be greater in returnees who may have been unrealistically optimistic during their contemporaneous baseline enumeration, before they realised how challenging local Sudanese conditions were. Also, non-migrants are likely to have experienced an intensification in the challenges of their local conditions between responding to a contemporaneous baseline and a retro-baseline. There is no such panel data in the Ethiopian and Somali datasets that could act as a comparison, testing of the patterns between contemporaneous and retro-baseline between returnees and non-migrants in different contexts in different countries.

7.5 Qualitative data summary

7.5.1 Qualitative methodology

Table 47 Overview of qualitative fieldwork components and tools

Tool number	Respondent type	Tool type	Tool objective
Component 1: Main IMPACT study			
1	Returnee	KII	▪ To validate and improve understandings of experience of matched non-migrants ▪ To explore further the intangible components of migration decision-making ▪ To test and validate findings and results from the RSS survey enumeration
2	Matched non-migrant	KII	▪ To validate and improve understandings of experience of matched non-migrants ▪ To explore further the intangible components of migration decision-making ▪ To test and validate findings and results from the RSS survey enumeration
3	Returnee and matched non-migrants	FGD	▪ To understand how community has changed over the past decade ▪ To deepen understandings of how JI programme has impacted overall community ▪ To assess and observe differences in community well-being perceptions between returnees and matched non-migrants
4	Family/household	Group interview	▪ To gain insights into returnees' family members experiences of reintegration of the family member returning ▪ To gain insights into returnees' family members experiences of with IOM programming
Component 2: Community-based reintegration projects (CBRP)			
5	Returnees and community members	FGD	▪ To further understand how the CBRPs complement the individual reintegration assistance provided to returnees ▪ To explore changes (planned and unplanned) that may have occurred as a result of the CBRPs, using a modified or

Tool number	Respondent type	Tool type	Tool objective
			light touch application of the most significant change approach ▪ To hear from direct beneficiaries of the CBRPs (returnees and community members) about the changes that have occurred in relation to returnee reintegration and how this relates to the CBRPs
6	CBRP IPs	KII	▪ To further understand how the CBRPs complement the individual reintegration assistance provided to returnees ▪ To explore changes (planned and unplanned) that may have occurred as a result of the CBRPs, using a modified or light touch application of the most significant change approach
Component 3 – IOM internal migration after return study			
7	IOM internal migrants	KII	▪ To better understand internal migration phenomenon ▪ To explore the implications of internal migration on reintegration case management and IOM's approach sustainable reintegration
8	IOM non-migrants	KII	▪ To better understand internal migration phenomenon ▪ To explore the implications of internal migration on reintegration case management and IOM's approach sustainable reintegration

7.5.2 Qualitative results

Table 48 Comparison of RSI and qualitative reintegration scores for matched returnee and non-migrant participants of the qualitative exercises

Respondent no.	Well-being grid NM	RSI endline NM	Well-being grid returnee	RSI endline returnee	higher well-being grid	Higher RSI	Who seems to be doing better? (based on qualitative interview transcript)	Notes
609	2	0.577	3	0.839	returnee	Returnee	Non-migrant (NM)	NM has a good stable job. Returnee had bad experiences in Libya and struggled since return. Business did not work and is looking for a job
620	1	0.412	2	0.578	Returnee	Returnee	Similar	Both in bad situations without work. Returnee lost investment in his business as it closed during covid. Both want to migrate
622	3	0.437	1	0.523	NM	Returnee	NM	Returnee's intended destination was Libya to work. The conflict in Libya led to return. The business support from IOM failed due to the conditions in Sudan and is looking for a job. NM has some income, is dissatisfied and is considering migration
635	1	0.436	2	0.538	Returnee	Returnee	Similar	Both are TokTok drivers. Returnee's intended destination was Libya and worked there until conflict and could not. Phone business from IOM support failed
669	3	0.468	2	0.707	NM	Returnee	NM	Non-migrant Abdul is doing very well and happy with life, whereas the returnee Ibrahim is quite the opposite, without a job and considering having to re-migrate to support his family. (See Section 4.10.3)
678	4	0.643	2	0.701	NM	Returnee	NM	Returnee was arrested in Algeria and in prison and went on hunger strike to return. The money from IOM paid debts and does not have a job. The NM has an income
693	0	0.551	3	0.798	Returnee	Returnee	Similar	Both in poor conditions. Returnee kidnapped and tortured in Libya. Business failed upon return as used money to pay debts. NM is unsatisfied with current conditions
698	2	0.517	1	0.725	NM	Returnee	NM	Returnee struggled with employment since return and business failed. NM is in better situation and wants to buy house in the future. Returnee wants to re-migrate
713	0	0.419	2	0.617	Returnee	Returnee	Similar	Returnee was circular migrant to Libya, but on second trip due to war was in the middle of the conflict and returned. Business with IOM did not succeed, and he has no work. NM also struggling and experiences economic challenges
731	1	0.469	2	0.748	Returnee	Returnee	Returnee	Returnee was kidnapped, but escaped. Was able to find work and provide for his family while abroad. NM is displaced without home- impacted by environmental effects
733	2	0.423	3	0.738	Returnee	Returnee	Returnee	Able to work and pay off all migration debts, able to work and improve conditions of family
783	2	0.653	3	0.788	Returnee	Returnee	Similar	NM also a returnee (went to Libya), returnee paid off debts before return
784	5	0.293	3	0.580	NM	Returnee	Returnee	NM also a possible returnee. Well-being grid misaligned to interview
813	3	0.640	5	0.793	Returnee	Returnee	NM	NM also a possible returnee
836	4	0.406	4	0.629	Same	Returnee	Returnee	Returnee doing better than non-migrant
901	2	0.555	1	0.645	NM	Returnee	Similar	Both dissatisfied

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