

CIRCLE Programme Report Series

CIRCLE Counterfactual Report 2017



In partnership with:



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This report on the CIRCLE Counterfactual Survey for 2017 was prepared by:

Verity Buckley, ACU CIRCLE Programme Manager

Cover Photo: Attendees at a GIS and Remote Sensing training workshop, Research Uptake Activity by Dr John R Otukey, Cohort 3 CVF. Photo by Dr John R Otukey.

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Executive Summary

In order to evaluate the progress and achievements made by CIRCLE Visiting Fellows (CVFs) in the last 12 months and the Institutional Strengthening Programme, data collected from CVFs has been compared to data submitted by non-CVF early career researchers based at CIRCLE institutions (CI) or early career researchers based at institutions that were not affiliated with the CIRCLE programme, but had expressed interest in taking part at the planning stage of the programme.

81% of all respondents had submitted at least one publication in the last 12 months. Of those submitted, 59% had been successfully published to date. 69% of all respondents had submitted at least one peer-reviewed journal article for publication in the last 12 months. Of those submitted, 62% had been successfully published to date.

Respondents provided details of 273 peer reviewed journal articles which had been reported published, representing 89% of total reported published articles. Although the CVF group had lower publication rates, 78% of their articles were published in reputable journals, compared to 63% of the CI group and just 29% of the NC group.

CVFs were lead authors for 61% of publications for which they provided details. This is a higher percentage than the CI and NC groups who both reported being leads authors for 55% of publications with details provided.

72% of all respondents had been involved in at least one grant / funding application, with a total of 296 applications being submitted. CVFs had the highest proportion of respondents involved in applications, with 80% of the group having submitted at least one application. Both the CI and NC groups had 66% of their respondents' report being involved in at least one application.

69% of all respondents indicated that they had been involved in at least one research collaboration over the past 12 months. Both the CVF and CI groups had higher proportions of respondents report at least one research collaboration than the NC group. CVFs based in Kenya producing a higher average number of collaborations than the other groups.

55% of the total reported research collaborations were with external institutions. The percentage of external collaborations and average numbers of external collaborations per group were similar for all groups.

88% of all respondents had attended a conference or event in the last 12 months. CVFs had presented at a similar proportion of conferences attended as the other two groups but had delivered the highest number of presentations.

53% of respondents at CIRCLE affiliated institutions reported an increase in the level of communication and/or discussion of support for ECRs, compared to 29% of respondents based at that were not affiliated with CIRCLE programme.

43% of all respondents based at CIRCLE affiliated institutions indicated that the level of actual support for ECRs had increased over the last 12 months, compared to 17% of respondents based at institutions that were not affiliated with CIRCLE programme.

An increase in the level of actual support for ECRs based in institutions affiliated with CIRCLE was reportedly higher than those not affiliated with CIRCLE according to respondents based in Ethiopia, Nigeria, and Zimbabwe.

Data covered in this report

In order to evaluate the progress and achievements made by CIRCLE Visiting Fellows (CVFs) in the last 12 months and the Institutional Strengthening Programme, data collected from CVFs has been compared to data submitted by non-CVF early career researchers based at CIRCLE institutions (CI) or early career researchers based at institutions that were not affiliated with the CIRCLE programme, but had expressed interest in taking part at the planning stage of the programme.

Data covering the last 12 months on the following categories was compared:

- **Publications**
The number of publications submitted by respondents, the number of articles of which respondents were lead authors, the number of submissions that have been published, and the quality of journals in which articles had been published.
- **Grant and Funding applications**
The number of grant funding applications submitted by respondents.
- **Research Collaborations**
The number of research collaborations conducted by respondents, and the number of collaborations conducted with researchers external to the respondent's institution.
- **Conferences, seminars and other events**
The number of conferences, seminars and other events attended by the respondents, and how many conferences at which the respondents delivered presentations on their research.
- **Support for early career researchers**
Reported changes in the level of discussion/communication regarding support for early career researchers at their institution and the changes in actual support that has been delivered.

Methodology

In Year One, the counterfactual survey was sent to 225 academics who expressed an interest (EOIs) in participating the CIRCLE programme and CIRCLE institution representatives to distribute to researchers at their institution (including non-climate change researchers). Responses were received from 88 EOIs and 118 CIRCLE Institution researchers.

In Year Two, the counterfactual survey was sent to all those who responded to the previous year's survey who had indicated that they didn't mind being contacted again and weren't part of CVF cohorts 1 or 2 (78 EOIs and 77 home institution researchers). 70 responses were received for this survey.

In Year Three, the pool of academics contacted was widened to increase the number of survey respondents. 121 academics were contacted directly to participate in the counterfactual survey. 67 respondents to the previous survey said that they would be happy to be contacted in the future and were not part of the cohort 3 applicants. In addition, 54 past applicants to the CIRCLE programme who had not already participated in the counterfactual survey were contacted. CIRCLE institutions were also asked to share the survey with their researchers. In total there were 71 Respondents for this survey.

The Year Four counterfactual survey was sent to 348 early career researchers who were either non-CVFs based at CIRCLE institutions (CI) or based at non-CIRCLE affiliated institutions based in Sub-Saharan Africa, or institutions that had expressed interest in the initial phases of the CIRCLE programme but were ultimately not included in the final selection (NC). Those that were invited to be a part of the CI group had either taken part in previous counterfactual studies and had given permission to be contacted again or were invited by CVFs or their institutions CIRCLE Institutional Strengthening Programme (ISP) representatives (known as ISP Champions). Individuals who had expressed interest in CIRCLE on behalf of their institution in the initial planning phase of the programme, and who had agreed to take part in our counterfactual surveys were again invited to take part. They also were asked to invite other early career researchers based at their institution to take part. A total of 204 early career academics were included in the final dataset. A breakdown of respondent demographics is provided in the section below.

Respondent demographics

A total of 76 responses were received from the CI group, and 41 from the NC group. These responses were compared to progress reports submitted by 87 CVFs across 3 Cohorts.

Table 1 - Breakdown of responses by group

CIRCLE VISITING FELLOWS (CVF)	87
NON-CVF ACADEMICS BASED AT CIRCLE INSTITUTIONS (CI)	76
ACADEMICS BASED AT INSTITUTIONS NON-AFFILIATED WITH CIRCLE (NC)	41

CVF Cohort Split

All Cohort 3 fellows were required to submit a report at the end of the fellowship programme. All 33 fellows submitted a report and the data was included in this analysis. During 2017, Cohort 2 were asked to provide follow up reports at 6 months post-fellowship and 12 months post-fellowship, and Cohort 1 were asked to provide a 2-year post-fellowship report. 29/29 (100%) of Cohort 2 submitted at least one follow up response (either 6 month or 1 year)¹ and 25/33 (75%) responses were received from Cohort 1.

Table 2 - Breakdown of CVF response by Cohort

COHORT 1	COHORT 2	COHORT 3
25	29	33

Respondents by country

193/204 (95%) of respondents were based in one of the ten CIRCLE target countries.² A breakdown of these respondents is provided below.

Table 3 - Breakdown of all respondents by country

		CVF	CI	NC	TOTAL
CIRCLE TARGET COUNTRIES	ETHIOPIA	10	8	1	19
	GHANA	14	7	4	25
	KENYA	6	11	4	21
	MALAWI	0	4	0	4
	NIGERIA	32	29	10	71
	SOUTH AFRICA	8	6	4	18
	SUDAN	2	2	1	5
	TANZANIA	10	0	2	12
	UGANDA	2	0	4	6
	ZIMBABWE	3	9	0	12

¹ Where both a 6 month and a 12 month follow up report was submitted, responses were cross referenced for up-to-date and accurate information.

² CVFs have been selected from 31 institutions from nine countries in the region. Malawi is involved in the CIRCLE institutional strengthening programme but has not successfully nominated any fellows for the entirety of the programme.

NON-CIRCLE TARGET COUNTRIES	BENIN	0	0	1	1
	BURKINA FASO	0	0	1	1
	CAMEROON	0	0	3	3
	NAMIBIA	0	0	1	1
	NIGER	0	0	2	2
	RWANDA	0	0	1	1
	SENEGAL	0	0	1	1
	ZAMBIA	0	0	1	1
		87	76	41	204

11/204 (5%) of respondents were based in countries not targeted by the CIRCLE programme. Nigerian academics represented 35% of the total respondents for all surveys responses and were the largest nationality proportion for each group. The second largest proportion by country was Ghana (12%) and third was Kenya (10%).

Respondents by gender

127/204 (62%) of all respondents were male. The CVF group were closest to a 50:50 ratio by gender, with 46 (53%) female respondents. The CI group was 32% female and the NC group just 17% female.

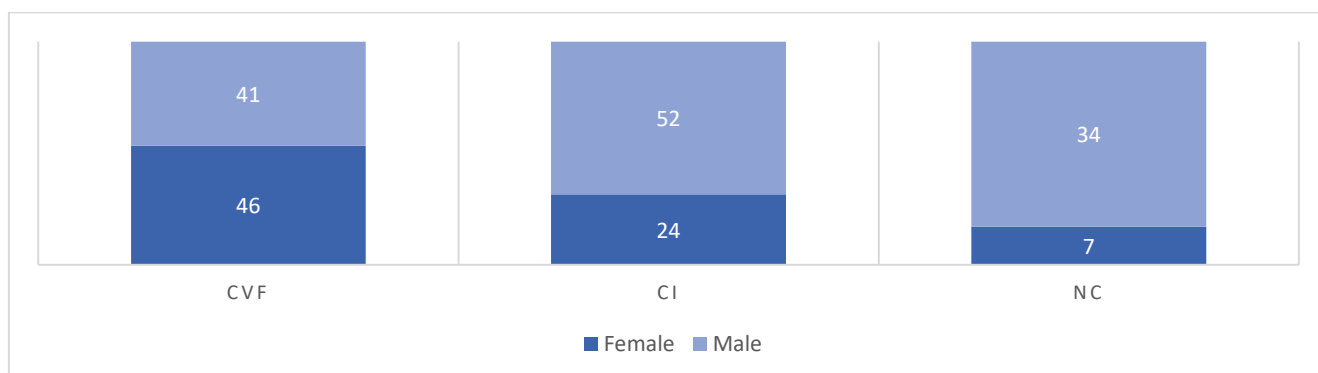


Figure 1 – All respondents by gender

Respondents by highest degree held

118/204 (58%) of all respondents were PhD holders, with 87 (42%) having a Master's as their highest degree held. When split by group, NC responses were majority Master's Holders, whereas the CVF and CI groups were majority PhD holders.

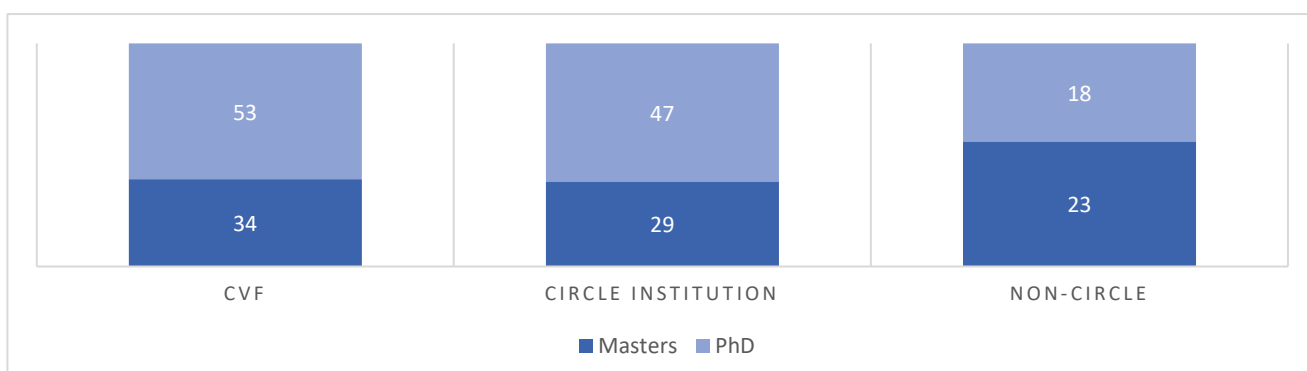


Figure 2 – All respondents by highest degree held

Publications

All Publications

166/204 (81%) of all respondents indicated that they had submitted at least one publication in the last 12 months, with a total of 641 publications being submitted overall. This total included journal articles, book chapters, conference proceedings and policy documents. The NC group had the highest percentage of respondents with at least one submission.

Table 4 - Number of respondents reporting at least one or more publication submissions in the last 12 months

	CVF	CI	NC	ALL
ONE OR MORE SUBMISSION	65	63	38	166
% OF GROUP TOTAL WITH SUBMISSIONS	75%	83%	93%	81%

Of the publications submitted, 378 (59%) had been successfully published to date. Individuals based at CIRCLE affiliated institutions had higher publication rates than the NI group, although the CVF group had a lower publication rate than their peers within the CI group.

Table 5 - Number of submitted vs published publications divided by group

	CVF	CI	NC	ALL
TOTAL NO. SUBMITTED BY GROUP	245	260	136	641
TOTAL NO. PUBLISHED BY GROUP	143	170	65	378
PUBLICATION RATE (%)	58%	65%	48%	59%

In consideration to the group sizes, the average number of publications submitted and published is listed below. Although Cohort 3 have only just completed their Fellowships, their average numbers of submissions and publications was in line with averages of Cohorts 1 and 2 and their data was therefore included in the CVF group. In the last 12 months, the CI respondent group had submitted more articles on average than the other groups, and also had higher publication rates.

Table 6 - Average number of submissions vs published publications per person by group

	CVF	CI	NC
AVERAGE NO. SUBMITTED PER PERSON	2.8	3.4	3.3
AVERAGE NO. PUBLISHED PER PERSON	1.7	2.7	1.7

Peer reviewed journal articles

This section examines peer-reviewed journal articles produced by the respondents.

141/204 (69%) of all respondents indicated that they had submitted at least one peer-reviewed journal article for publication in the last 12 months, with a total of 495 articles being submitted overall.

Table 7 - Number of respondents reporting at least one or more peer-review journal article submission in the last 12 months

	CVF	CI	NC	ALL
ONE OR MORE SUBMISSION	57	55	29	141
% OF GROUP TOTAL WITH SUBMISSIONS	65%	72%	71%	69%

Of those submitted, 306 (62%) had been published to date. As with overall publications, a higher percentage of CI respondents had submitted at least one peer review journal article when compared to the other groups, although the NC group were only 1% lower.

Table 8 - Number of submitted vs published peer-review journal articles divided by group

	CVF	CI	NC	ALL
TOTAL NO. SUBMITTED BY GROUP	180	221	94	495
TOTAL NO. PUBLISHED BY GROUP	116	146	44	306
PUBLICATION RATE (%)	64%	66%	47%	62%

As above, Cohort 3 data was included in spite of the fact that they had only recently completed their Fellowships as their reported submissions and publications was in line with Cohorts 2 and 3. The CI group had submitted more articles on average per person than the other groups, and also had higher publications rates.

Table 9 - Average number of submissions vs published publications per person by group

	CVF	CI	NC
AVERAGE NO. SUBMITTED PER PERSON	2	2.9	2.3
AVERAGE NO. PUBLISHED PER PERSON	1.5	2.7	1.5

In order to better understand the above findings, details of all published peer-reviewed journal articles were analysed in more detail. These are discussed in the section below.

Published peer review publication details

CVFs are asked to provide details of all publications submitted over the last 12 months. All details of CVF published peer-reviewed journal articles was therefore obtained. Both the CI and the NC groups were asked to provide details for published peer-reviewed journal articles only.

Unfortunately, details were not provided for all published peer review publications reported by the CI and NC groups. 105 respondents provided details of a total of 273 published peer reviewed journal articles.

Table 10 - No. of published peer review journal articles reported vs number with details provided

	CVF	CI	NC	ALL
NO. OF PUBLISHED ARTICLES REPORTED	116	146	44	306
NO. OF REPORTED PUBLISHED ARTICLES WITH DETAILS PROVIDED	116	119	38	273
% OF TOTAL REPORTED	100%	82%	86%	89%

Demographics of published journal article authors

Table 11 - Number of respondents with at least one published peer-reviewed journal article divided by group

	CVF	CI	NC	ALL
NUMBER OF AUTHORS PER GROUP	46	40	19	105

The largest author group consisted of CVFs, followed by CI and then NC.

68/105 (65%) of all authors who provided details of published articles were male. This is similar to the proportion of all male respondents. When divided by group, the percentage of female authors drops for the CI and NC groups. CI authors consisted of 30% female respondents and the CN authors consisted of just 11% female respondents (compared to 32% and 17% of overall female respondents per group respectively). The CVF group of authors with at least one published peer-reviewed journal consisted of 50% female respondents.

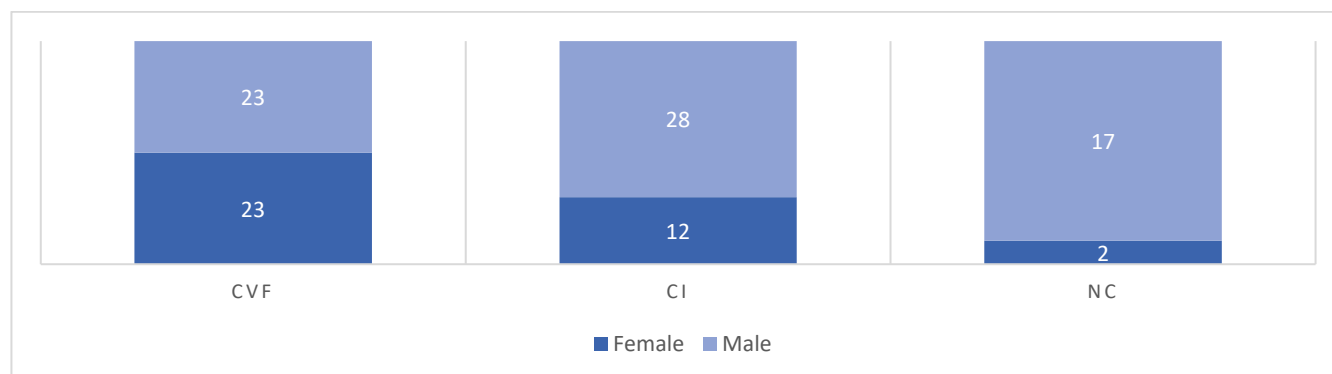


Figure 3 - Number of authors who provided details on published articles by gender

Lead or co-author

All published peer-review articles were split according to whether the respondent was a lead author or a co-author. CVFs were lead authors for 71/116 (61%) of publications for which they provided details. This is a higher percentage than the CI and NC groups who both reported being leads authors for 55% of publications with details provided.

Table 12 - Number of Lead authors and Co-authors by group

	CVF	CI	NC
LEAD AUTHOR	71	66	21
CO-AUTHOR	44	50	15
AUTHORSHIP INFORMATION NOT PROVIDED	1	3	2

When divided by gender, the CVF group had the highest proportion of female lead authors (54%) followed by the CI group (35%) and then the NI (18%).

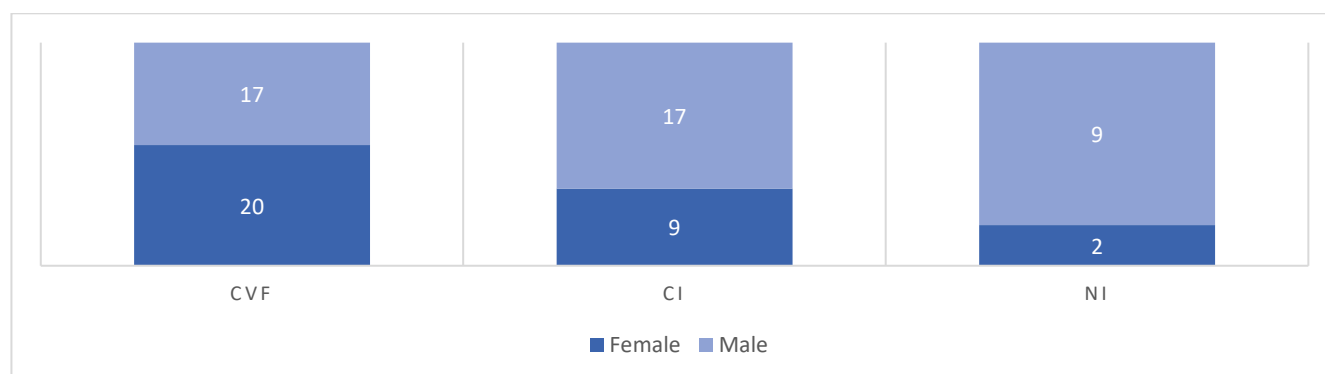


Figure 4 - Lead authors divided by gender

Journal quality

As part of the monitoring and evaluation of the CIRCLE programme, CVF publications are analysed to assess the quality of research outputs produced during the programme. Peer-reviewed journal articles are assessed using the following methods:

- **Scimago Journal & Country Rank** - Journals and publishers are searched on Scimago Journal & Country Rank (SJR). SJR is a metric for a journal that combines the number of citations that journal gets for all its articles over time and the prestige or importance of the journals that do the citing. Journals are then ranked in each subject category and the result expressed as Quartiles 1 to 4. This normalises for differences in impact factors between disciplines - journals in the social sciences typically have much lower impact factors than those in the natural sciences. SJR Quartiles can be obtained from the SJR website, which avoids the problem of journals self-reporting impact factors in unreliable ways. SJRs are derived from Scopus, therefore having an SJR is a reasonably good indicator of some threshold of genuineness.

In some cases, newer journals may lack an SJR or have one that does not reflect quality because they have not had time to build up citations, in which case the journals are researched in more detail using the below.

- **Online search for predatory journals** - Some journals are listed on website indicating that they are predatory or disreputable. In 2008, Prof Beall created a list of “potential, possible, or probable predatory scholarly open-access publishers” which was updated and maintained until 2017. The list has now been taken over by other academics. Predatory open access-publishing is an exploitative business model which charges high publication fees without rigorous peer-review editorial services. As the list is no longer being updated, further desk-based online research of each journal is carried out at each CVF reporting cycle.

A comparison of the quality of all published peer-reviewed journal articles with details provided by CVFs, CI respondents and NC respondents was conducted using the methods above.

Publications were divided into the following categories:

SJR Q1-2	JOURNALS RANKED IN SJR FIRST AND SECOND QUARTILES
SJR Q3-4	JOURNALS RANKED IN SJR THIRD AND FOURTH QUARTILES
OTHER REPUTABLE	JOURNALS LISTED ON REPUTABLE DATABASES OR PRODUCED BY REPUTABLE PUBLISHERS
LOW QUALITY	JOURNALS LISTED AS PREDATORY OR DISREPUTABLE
DATA NOT PROVIDED	NOT ENOUGH DATA PROVIDED ON PUBLICATION TO VERIFY JOURNAL

Results of the analysis are listed below:

Table 13 - Published peer reviewed journal articles divided by quality of journal

	CVF		CI		NC	
	NO. ARTICLES	% OF TOTAL	NO. ARTICLES	% OF TOTAL	NO. ARTICLES	% OF TOTAL
SJR Q 1 – 2	33	28%	17	14%	8	21%
SJR Q3 – 4	23	20%	9	8%	9	24%
OTHER REPUTABLE	34	29%	9	8%	7	18%
LOW QUALITY	25	22%	73	61%	14	37%
DATA NOT PROVIDED	1	1%	11	9%	0	0%

Although the CI group had reported higher publication rates, the group had the lowest number of published articles in reputable journals.

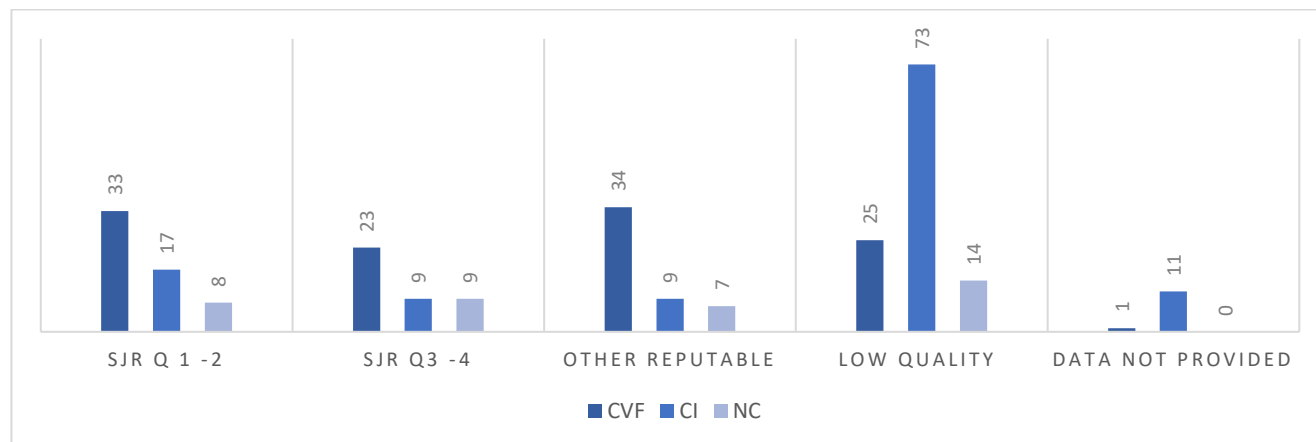


Figure 5 - Quality of published journal articles by group

CVFs had 90/116 (78%) articles published in reputable journals,³ representing the highest proportion compared to the other two groups. NC respondents were close behind with 24/38 (63%) of articles being published in reputable journals, but the CI group had just 35/119 (29%) articles published in reputable journals.

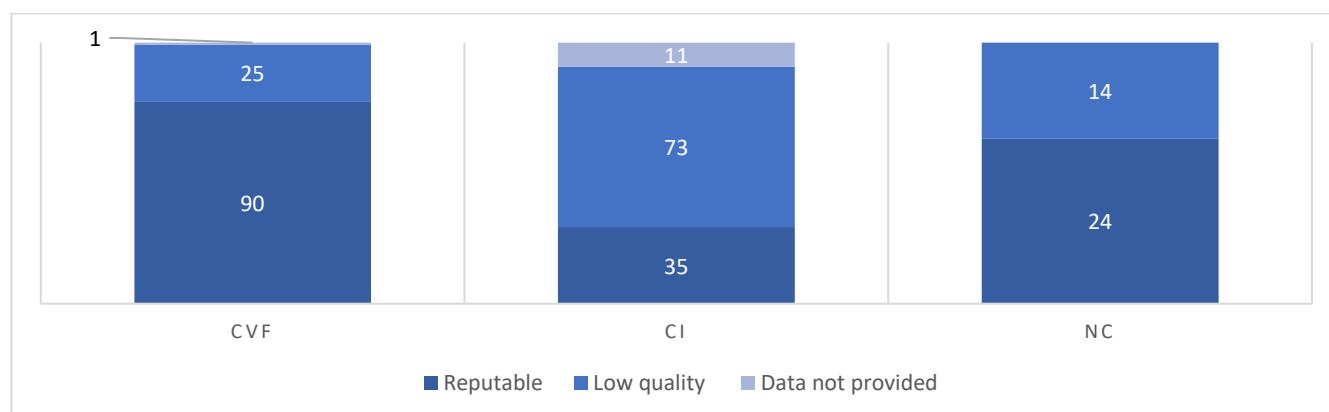


Figure 6 - Proportions of published journal article quality by group

Reputable and high-ranking journals are more likely to have lengthy review processes and tend to accept less publications than those that are lower ranking or are predatory in their nature. The higher publication rates reported by the CI group in the above section are therefore most likely due to the substantially higher numbers of submissions to less reputable journals.

The CVF group have received regular training and guidance on where to submit journal articles and how to recognise predatory or disreputable journals. The CVF data was therefore broken down by Cohort to see if this ongoing training had had an effect on the quality of journals to which articles were being submitted.

To investigate this matter further, the published article data was analysed based on the countries covered by the CIRCLE programme.

Publications were analysed by country based on whether they were reputable or disreputable. When divided by country, CVFs based in Ghana, Nigeria, and Zimbabwe produced more reputable journal articles than both the counterfactual groups. CVFs matched or produced more reputable journal articles than their institutional peers in Ethiopia, Kenya and

³ Reputable journals = combined total of SJR Q1-4 + Other reputable journals

South Africa. The only country where the CI group produced more reputable journals than the CVFs was Tanzania. The only country where academics based at non-CIRCLE affiliated institutions produced more reputable journal articles than both the CVF and CI groups was South Africa.

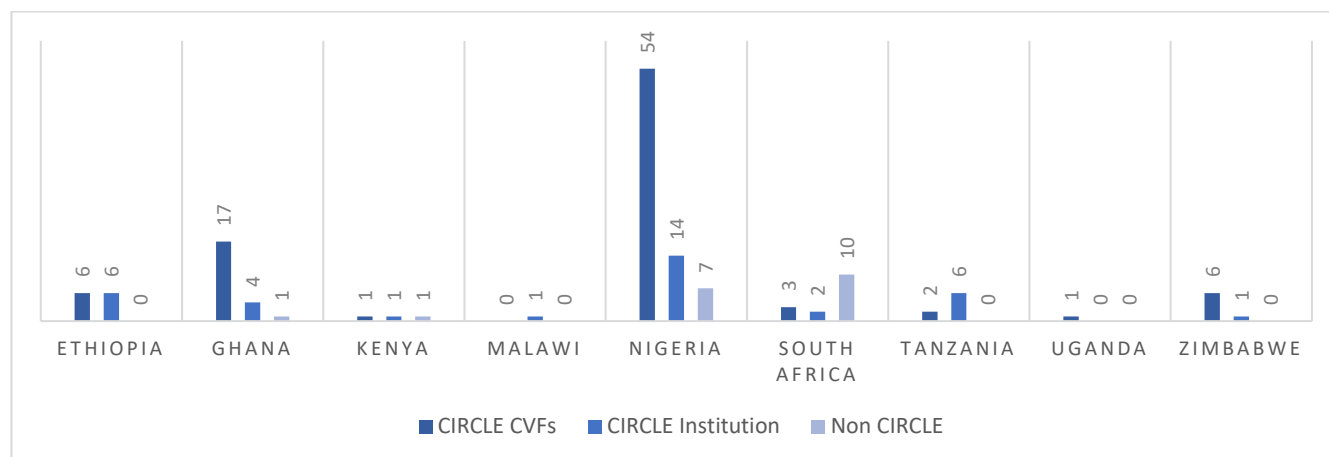


Figure 7 - Reputable published journal articles by country (NB – no data from Sudan provided)

The CI group produced more non-reputable journal articles than both CVFs and the NC group in Ghana, Kenya and Nigeria. CVFs produced more non-reputable journal articles than the other counterfactual groups based in South Africa.

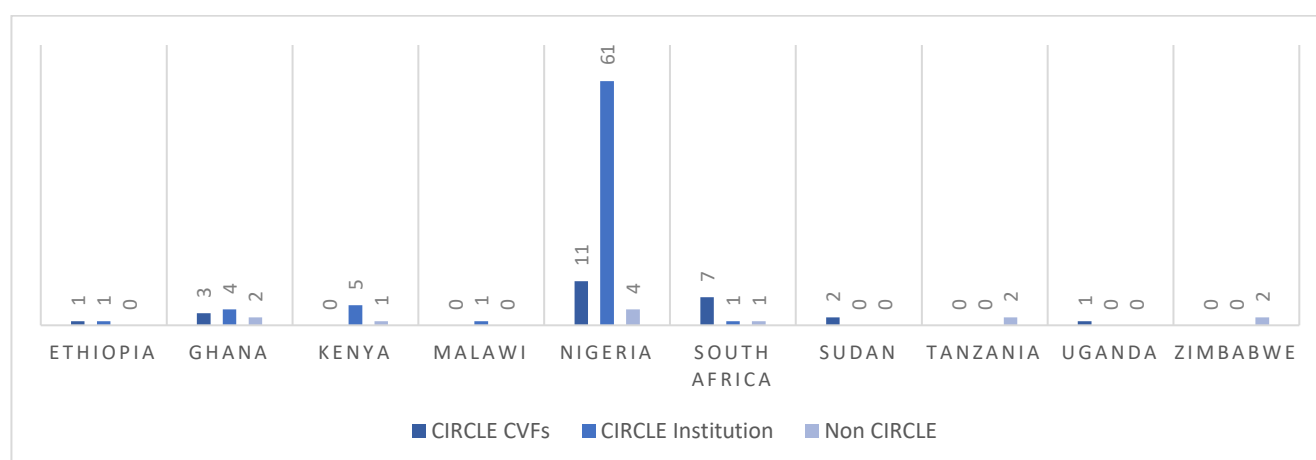


Figure 8 - Non-reputable published journal articles by country

The data regarding South African published journal articles is worth highlighting as there were just 3 early career researchers from South Africa in the NC group compared to 8 in the CVF group and 6 in the CI group. It would appear that there is room for further development at CIRCLE affiliated institutions which could be explored in the no-cost extension of the CIRCLE Institutional Strengthening Programme (ISP).

Grant / Funding Applications

147/204 (72%) of all respondents had been involved in at least one grant / funding application, with a total of 296 applications being submitted. When divided by group, CVFs had the highest proportion of respondents involved in applications, with 70/87 (80%) of the group having submitted at least one application. Both the CI and NC groups had 66% of their respondent's report being involved in at least one application.

In terms of the actual number of applications, the CVF group had the highest number of applications, but a slightly lower average number of applications per person at 1.4. Both the CI and NC group had an average of 1.5 applications per person.

Table 14 - Number of grant/funding applications divided by group

	CVF	CI	NC
NO. INVOLVED IN AT LEAST ONE GRANT/FUNDING APPLICATION	70	50	27
% OF TOTAL GROUP	80%	66%	66%
TOTAL NO. OF APPLICATIONS	119	116	61
AVERAGE NO. PER PERSON	1.4	1.5	1.5

When divided by country, the highest number of applicants were based in Nigeria, as expected by the proportion of Nigerian respondents.

Table 15 - Number of grant/funding applications divided by country

	COUNTRY	CVF	CI	NC	TOTAL
CIRCLE TARGETED COUNTRIES	ETHIOPIA	7	6	1	14
	GHANA	10	5	3	18
	KENYA	5	4	4	13
	MALAWI	0	3	0	3
	NIGERIA	29	20	6	55
	SOUTH AFRICA	6	4	3	13
	SUDAN	1	0	0	1
	TANZANIA	8	2	0	10
	UGANDA	2	0	0	2
	ZIMBABWE	2	6	3	11
COUNTRIES NOT TARGETED BY CIRCLE	BENIN	0	0	1	1
	BURKINA FASO	0	0	1	1
	CAMEROON	0	0	1	1
	NIGER	0	0	1	1
	RWANDA	0	0	1	1
	SENEGAL	0	0	1	1
	ZAMBIA	0	0	1	1

Respondents reported that they had been leads on 69/147 (47%) of the above applications. Although the CVF group had submitted a slightly higher number of applications as leads, the overall percentages of reported applications with respondents as leads was not drastically different between the three groups.

Table 16 - Number of grant/funding applications with respondents as leads

	CVF	CI	NC
NO. OF RESPONDENTS AS LEADS	33	25	11
% OF INVOLVED GROUP	47%	50%	41%
NO. OF APPLICATIONS WITH RESPONDENT AS LEAD	38	38	20
AVERAGE NO. OF LEADS PER PERSON	0.5	0.8	0.7

Again, Nigerian applicants were leads on the highest number of applications, with Ghanaians second.

Table 17 - Number of grant/funding applications divided by country

	COUNTRY	CVF	CI	NC	GRAND TOTAL
CIRCLE TARGETED COUNTRIES	ETHIOPIA	4	4	0	8
	GHANA	6	4	3	13
	KENYA	3	3	1	7
	NIGERIA	12	8	4	24
	SOUTH AFRICA	2	1	1	4
	SUDAN	1	0	0	1
	TANZANIA	4	1	0	5
	ZIMBABWE	1	4	1	6
NON-CIRCLE	ZAMBIA	0	0	1	1

Collaborations

141/204 (69%) of all respondents indicated that they had been involved in at least one research collaboration over the past 12 months, with a total of 374 collaborations reported.

Both the CVF and CI groups had higher proportions of respondents report at least one research collaboration than the NC group.

Table 18 - Number of research collaborations divided by group

	CVF	CI	NC
NO. INVOLVED IN RESEARCH COLLABORATIONS	41	63	37
% OF TOTAL GROUP	47%	72%	42%
TOTAL NO. OF RESEARCH COLLABORATIONS	128	165	81
AVERAGE NO. PER PERSON FOR WHOLE GROUP	3.1	2.6	2.2

The respondent groups from CIRCLE-targeted countries were compared. When divided by country, Nigerian respondents reported the highest number of research collaborations per person.

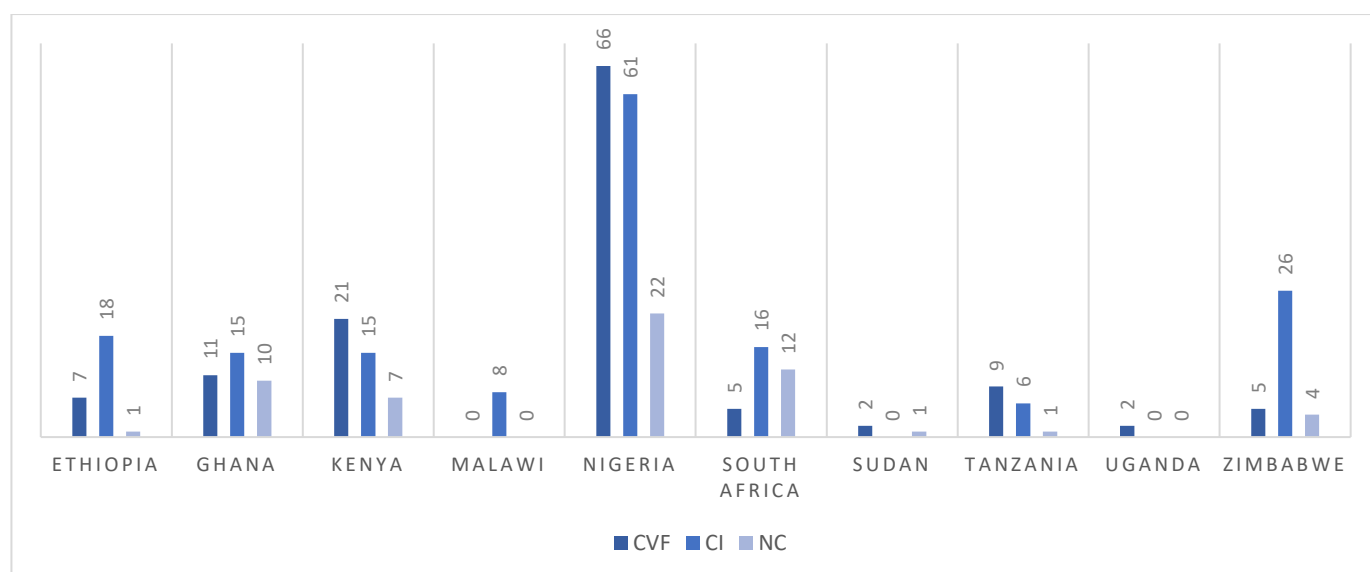


Figure 9 - Number of research collaborations by CIRCLE-targeted country

CVFs based in Kenya were producing a higher average number of collaborations than the other groups, but numbers were significantly lower in South Africa. A breakdown of the average number of collaborations per group by CIRCLE target country is provided below.

Table 19 - Average number of research collaborations per group divided by country

	CVF	CI	NC
ETHIOPIA	0.7	2.6	1
GHANA	0.8	2.1	2.5
KENYA	3.5	1.4	1.8
MALAWI	0	2	0

NIGERIA	2.1	2.1	2.2
SOUTH AFRICA	0.6	2.7	3
SUDAN	1	0	1
TANZANIA	0.9	3	0.5
UGANDA	1	0	0
ZIMBABWE	2	2.9	1

Respondents were asked how many of their total collaborations were with researchers that were external to their own institution. 206/374 (55%) of the total reported research collaborations were with external institutions.⁴ The percentage of external collaborations and average numbers of external collaborations per group were similar for all groups.

Table 20 - Research collaborations with external institutions by group

	CVF	CI	NC
NO. INVOLVED IN RESEARCH COLLABORATIONS WITH EXTERNAL INSTITUTIONS	19	49	26
TOTAL NO. OF RESEARCH COLLABORATIONS WITH EXTERNAL INSTITUTIONS	69	89	48
% OF RESEARCH COLLABORATIONS TOTAL	54%	54%	59%
AVERAGE NO. PER PERSON	0.8	1.2	1.2

As above, compared by CIRCLE-targeted country, Nigerian respondents reported the highest number of external research collaborations per person, although this is to be expected due to the high numbers of Nigerian respondents.

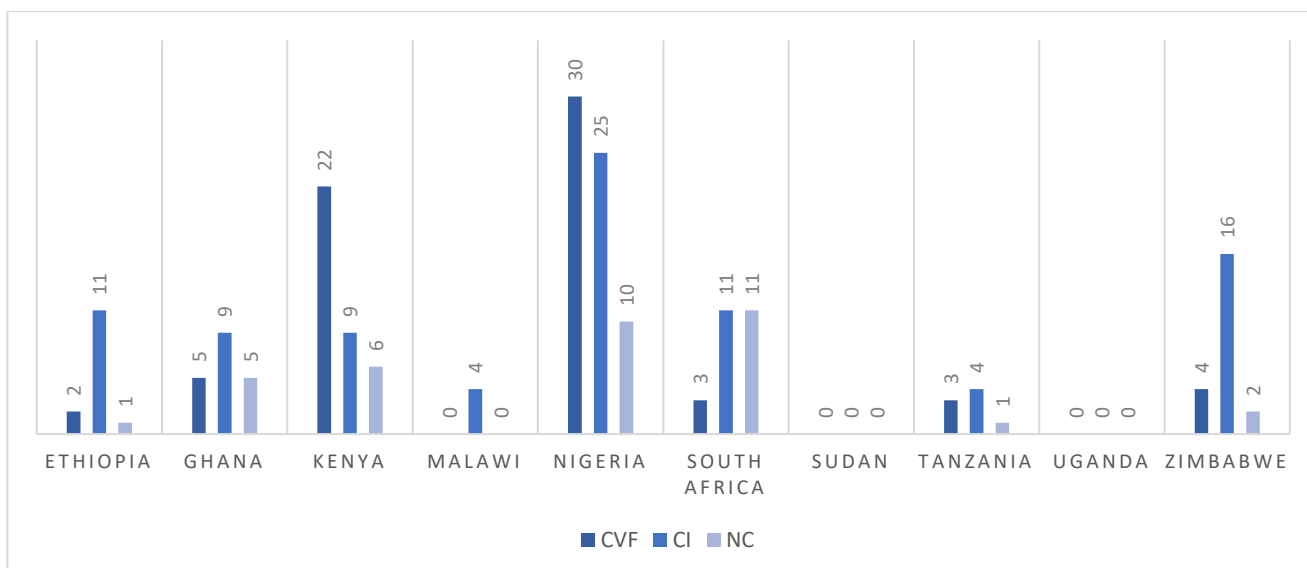


Figure 10 - Number of external collaborations by CIRCLE-targeted country

CVFs based in Kenya were producing the highest number of external research collaborations as the other two groups. Again, the NC respondents based in South Africa were producing higher numbers of external research collaborations compared with the other two groups in the country.

⁴ Cohort 3 have been working with external researchers at their host institution for the last 12 months and a small number of CVFs had included their CIRCLE research as an external collaboration. These responses were consequently removed.

Table 21 - Average number of external research collaborations by group

		CVF	CI	NC
ETHIOPIA		0.2	1.4	1
GHANA		0.4	1.3	1.3
KENYA		3.7	0.8	1.5
MALAWI		0	1	0
NIGERIA		0.9	0.9	1
SOUTH AFRICA		0.4	1.8	2.8
SUDAN		0	0	0
TANZANIA		0.3	2	0.5
UGANDA		0	0	0
ZIMBABWE		0.3	1.8	0.5

The average number of external collaborations per person in the CVF group is slightly lower than the other two groups. This could be for a number of reasons. First of all, a number of Cohort 3 respondents included their CIRCLE research projects as external collaborations, and these responses were subsequently removed. Cohort 3 may have also had less opportunity to develop external collaborations while on their fellowships. Eight Cohort 1 fellows failed to submit a progress report for the last 12 months, which may have increased the average number of collaborations.

See a breakdown by Cohort below:

Table 22 - Research collaboration numbers by Cohort

	COHORT 1	COHORT 2	COHORT 3	TOTAL
NO. OF CVFS PARTICIPATING IN RESEARCH COLLABORATIONS	8	20	13	41
% OF TOTAL GROUP	32%	69%	39%	47%
TOTAL NO. OF COLLABORATIONS	15	81	32	128
AVERAGE NO. COLLABORATIONS PER PERSON	0.6	2.8	1	1.4
TOTAL NO. OF RESEARCH COLLABORATIONS WITH EXTERNAL INSTITUTIONS	6	2	11	19
TOTAL NO. EXTERNAL COLLABORATIONS	8	39	22	69
AVERAGE NO. PER PERSON	0.3	1.3	0.7	0.8

Conferences, seminars and other events

88% of all respondents had attended a conference or event in the last 12 months. The CVF group had the lowest average number of events attended, with Cohort 2 attending a slightly higher average number of conferences per person (3.1 compared to 2.1 Cohort 1 and 2.3 Cohort 3).

Table 23 - Number of respondents attending conferences by group

	CVF	CI	NC
NO. ATTENDING CONFERENCES	71	69	39
CONFERENCES ATTENDED	221	219	107
AVERAGE NO. ATTENDED	2.5	2.9	2.6

The respondent groups from CIRCLE-targeted countries were compared. CVFs based in Ghana, Nigeria and Tanzania attended more conferences than other groups in their countries.

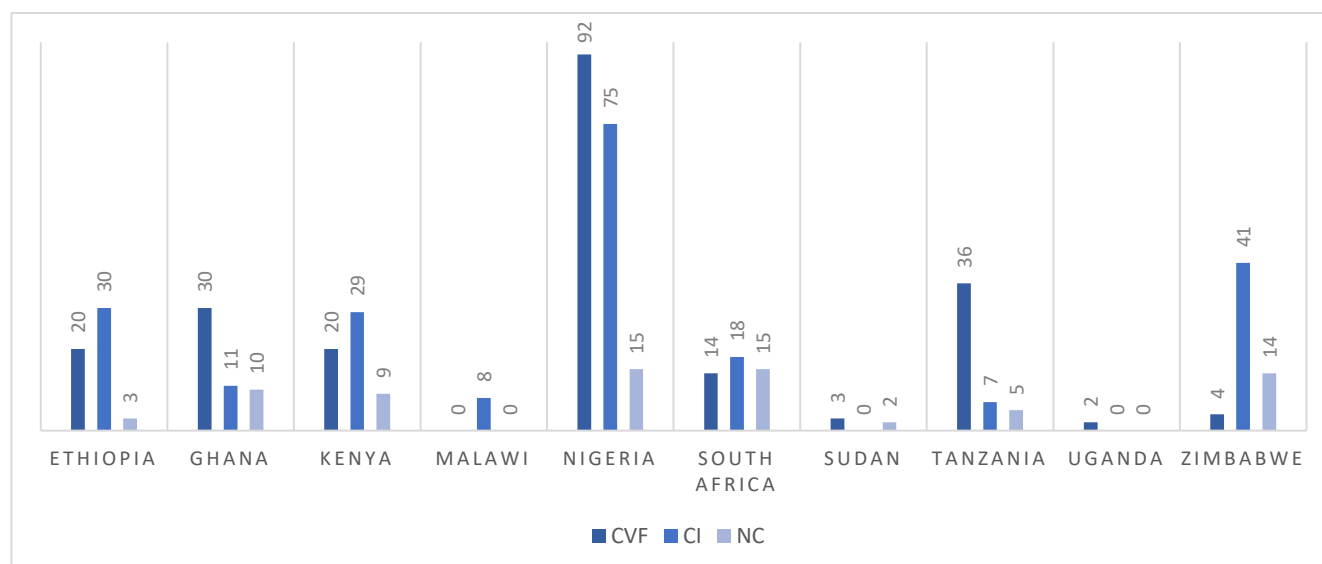


Figure 11 - Number of conferences attended by respondents based in CIRCLE-target countries

When examining the average number of conferences attended per person based in CIRCLE-targeted countries, those based in CIRCLE affiliated institutions, i.e. CVFs and CI respondents, attended a higher average number of conferences compared to the NC group for most countries, with the exception of South Africa and Ghana.

Table 24 - Average number of conferences attended by country

	CVF	CI	NC
ETHIOPIA	2	3.8	3
GHANA	2.1	1.6	2.5
KENYA	3.3	2.6	2.3
MALAWI	0	2	0
NIGERIA	2.9	2.6	1.5
SOUTH AFRICA	1.8	3	3.8

SUDAN	1.5	0	2
TANZANIA	3.6	3.5	2.5
UGANDA	1	0	0
ZIMBABWE	1.3	4.6	3.5

Respondents were asked to report at how many of the above conferences they had presented their research.

Table 25 - Number of presentations delivered by group

	CVF	CI	NC
NO. PRESENTING AT CONFERENCES	55	58	32
PRESENTATIONS DELIVERED	121	116	61
AVERAGE NO. PRESENTATIONS	2.2	1.7	1.6
% OF CONFERENCES AT WHICH PRESENTED	55%	53%	57%

CVFs had presented at a similar proportion of conferences attended as the other two groups but had a higher average number of presentations.

The respondent groups from CIRCLE-targeted countries were compared. CVFs based at institutions in Ghana, Nigeria and Tanzania presented at more conferences than the other groups.

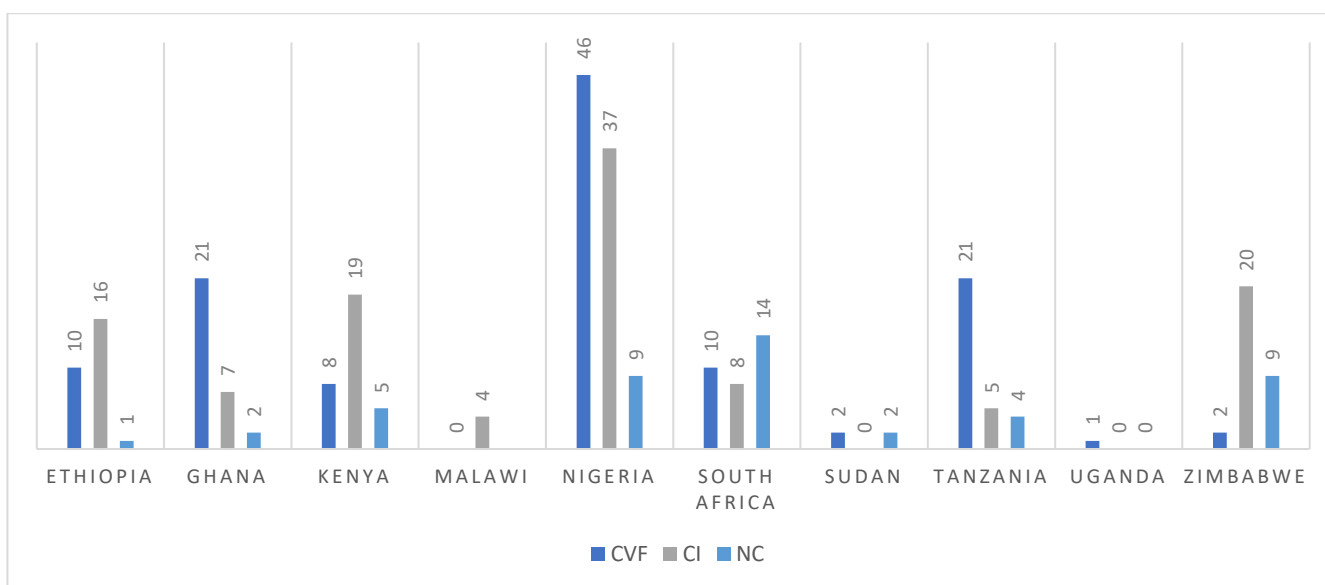


Figure 12 - Number of presentations delivered by CIRCLE-targeted country

When examining the average number of conferences presentations delivered per person based in CIRCLE-targeted countries, the NC group had delivered a higher number of presentations than both other groups in South Africa.

Table 26 - Average number of presentations delivered by country

	CVF	CI	NC
ETHIOPIA	1	2	1
GHANA	1.5	1	0.5
KENYA	1.3	1.7	1.3
MALAWI	0	1	0
NIGERIA	1.4	1.3	0.9
SOUTH AFRICA	1.3	1.6	3.5
SUDAN	2	0	2
TANZANIA	2.1	2.5	2
UGANDA	0.5	0	0
ZIMBABWE	0.7	2.2	2.3

Support for early career researchers

The CIRCLE programme has delivered an institutional strengthening programme in an attempt to address gaps identified in the support offered to early career researchers (ECRs). All respondents, with the exception of Cohort 3 CVFs,⁵ were asked whether the discussion of and actual support for ECRs had changed in the last 12 months.

Level of discussion and/or communication regarding support for early career researchers

81/171 (47%) of all respondents indicated that the level of discussion and/or communication regarding ECR support had increased. The data was then analysed based on whether the respondent was based at a CIRCLE or non-CIRCLE affiliated institution. 53% of those based at CIRCLE institutions reported an increase in discussion and/or communication compared to just 29% at non-CIRCLE affiliated institutions.

Responses were divided by CIRCLE and non-CIRCLE affiliation.

CIRCLE institutions

53% of respondents at CIRCLE affiliated institutions reported an increase in the level of communication and/or discussion of support for ECRs. 15% reported that there was no difference in the levels over the last 12 months. 11% reported a reduction in levels, which will be investigated further.

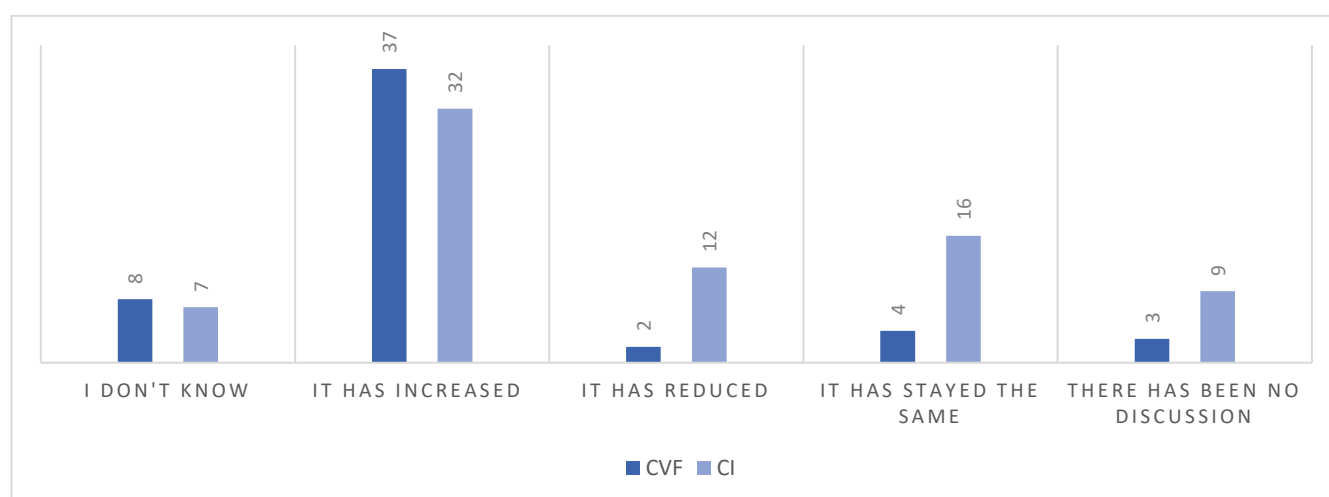


Figure 13 - Reported changes in level of discussion and/or communication regarding ECR support at CIRCLE affiliated institutions

Responses were divided by country for further analysis. 70% of respondents based in Zimbabwe reported an increase in the discussion surrounding ECR support at their institutions. Increases were also reported by large proportions of participants based in Ethiopia (67%) and Nigeria (67%). 25% of respondents in Malawi reported a reduction in conversation. This will be investigated further as there is only one institution that is involved in the CIRCLE institutional strengthening programme which directly addresses this issue.

⁵ As part of the CIRCLE Fellowship Programme, Cohort 3 CVFs have been based at their host institution for the past 12 months and would therefore not be reliably able to assess the changes in discussion of, and actual change in, support for early career researchers at their home institutions.

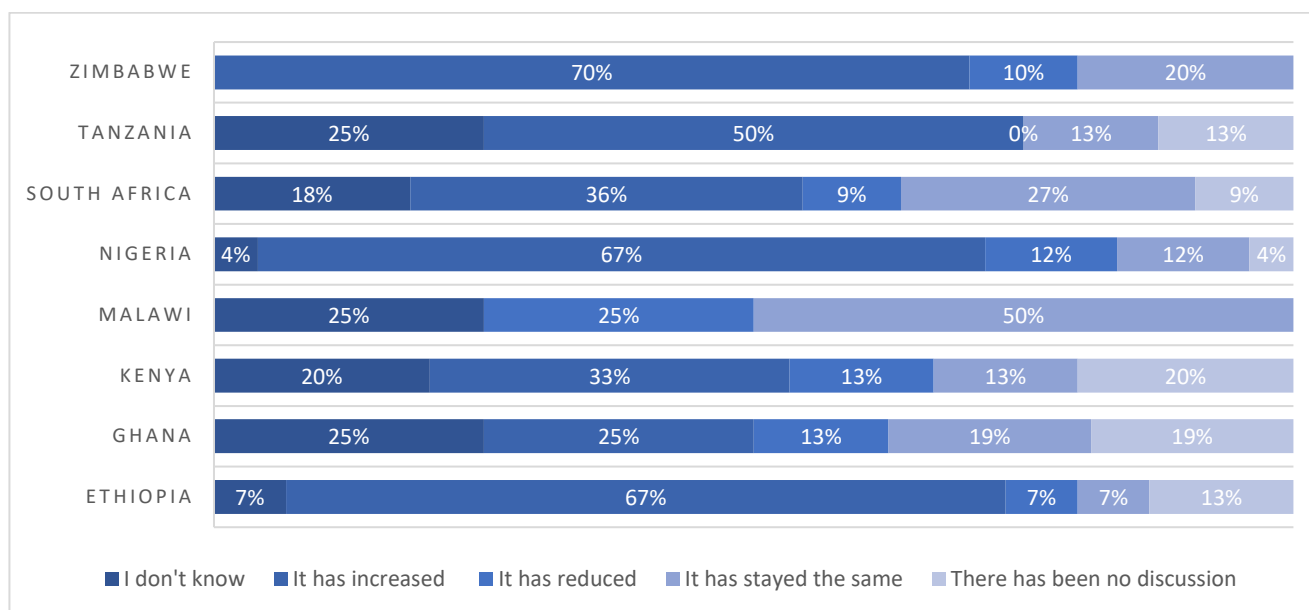


Figure 14 - Percentages of change in reported levels of conversation regarding ECR support by country

Non-CIRCLE institutions

12/41 (29%) of respondents based at institutions that were not affiliated with CIRCLE programme reported an increase in the level of discussion and/or communication regarding ECR support.

Where there was more than one respondent per country, responses were divided by country for further analysis. Respondents from Kenya had the largest proportion of reported increased in communication.

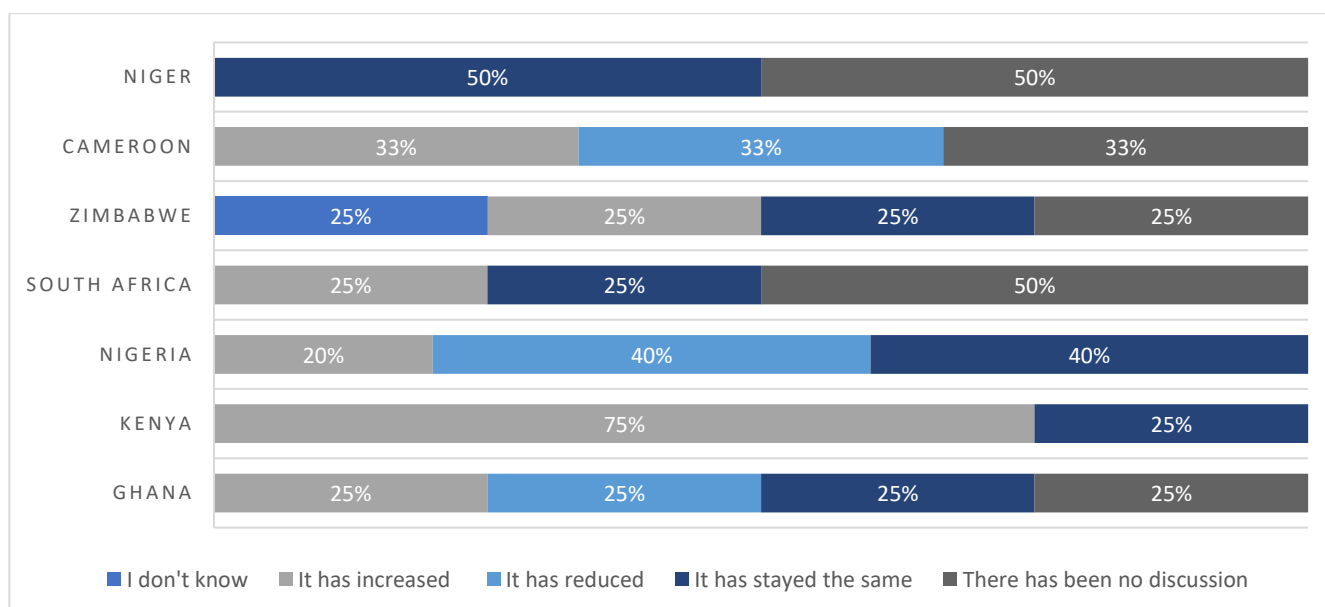


Figure 15 - Percentages of levels of conversation regarding ECR support by country⁶

⁶ Responses from Ethiopia, Sudan, Tanzania, Burkina Faso, Benin, Namibia, Rwanda, Senegal and Zambia were omitted from the percentages as there was only one respondent per country. Respondents from Tanzania and Benin reported an increase, Rwanda reported a reduction, Sudan that it stayed the same, Burkina Faso no discussion and respondents from Ethiopia, Namibia and Senegal reported that they didn't know.

Proportions of respondents who reported an increase in the levels of communication were compared by country. It appears that the level of discussion of support for ECR is similar in institutions in Ghana, regardless of whether or not they are affiliated with CIRCLE. Levels of discussion also appear similar at institutions based in South Africa. An increase in the level of discussion at institutions affiliated with CIRCLE was reportedly higher than those not affiliated with CIRCLE according to respondents based in Ethiopia, Nigeria, Tanzania and Zimbabwe. The only country where reported increases in discussion was higher at institutions not affiliated with CIRCLE was Kenya.

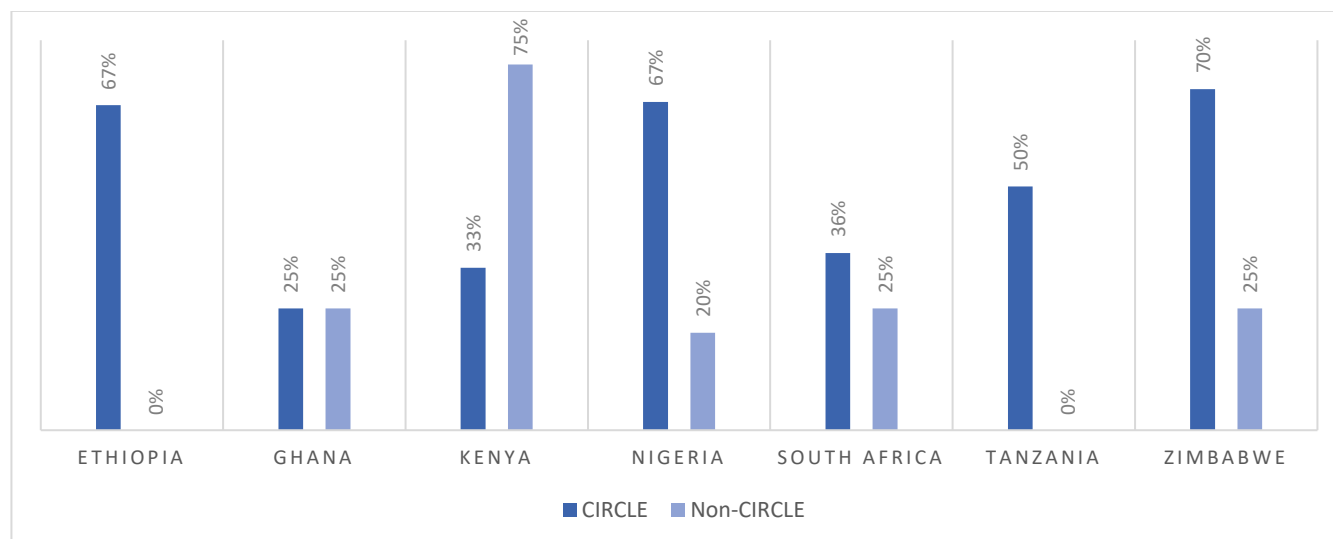


Figure 16 - Percentage of respondents who reported an increase in the level of communication regarding ECR support at their institution by country

Level of actual support for early career researchers

74/171 (43%) of all respondents indicated that the level of actual support for ECRs had increased over the last 12 months. The data was then analysed based on whether the respondent was based at a CIRCLE or non-CIRCLE affiliated institution. 52% of those based at CIRCLE institutions reported an increase in actual support compared to just 17% of those at non-CIRCLE affiliated institutions.

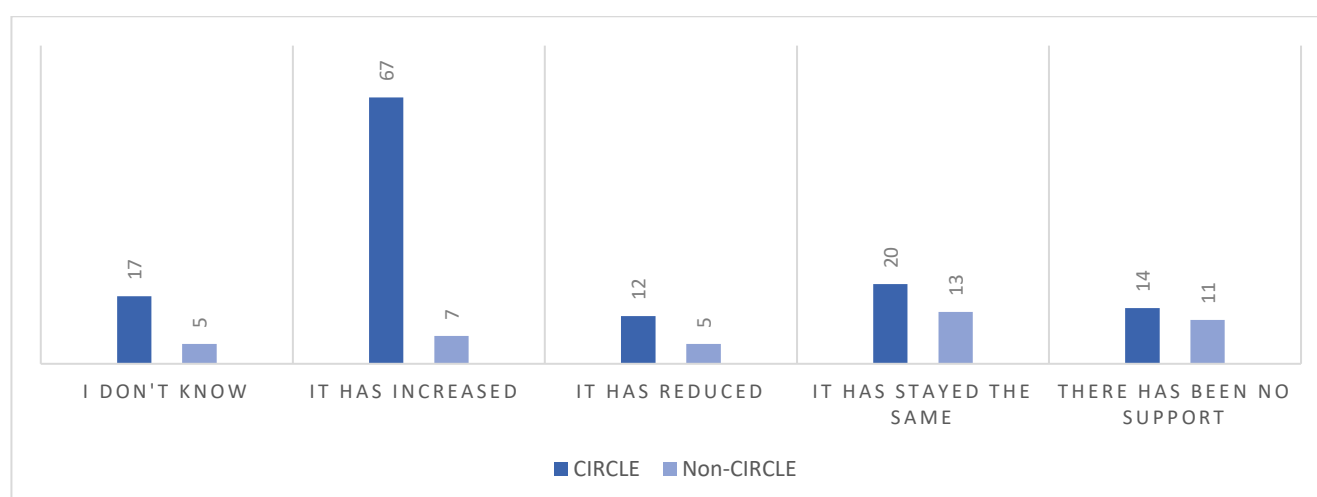


Figure 17 - Reported changes in levels of actual ECR support at respondent institutions

Responses were divided by CIRCLE and non-CIRCLE institutions to analyse in more detail.

CIRCLE institutions

67/130 (52%) of respondents at CIRCLE affiliated institutions reported an increase in the level of support for ECRs. 20/130 (15%) reported that there was no difference in the levels over the last 12 months. 12/130(9%) reported a reduction in levels, and 14/130 (11%) that there had been no support at all, both of which will be investigated further.

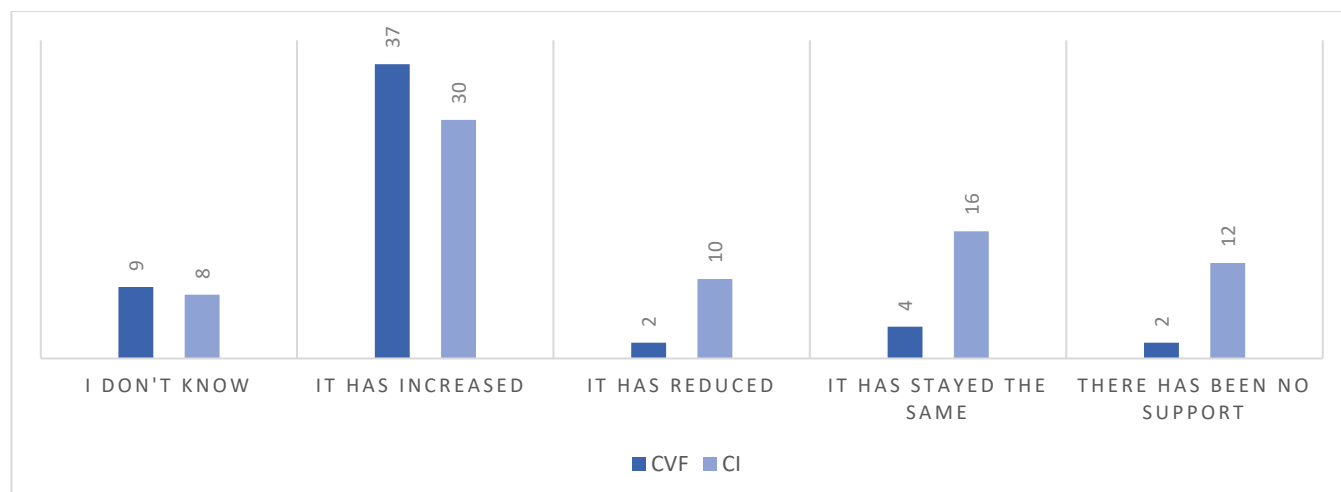


Figure 18 - Reported changes in actual ECR support at CIRCLE affiliated institutions

Responses were divided by country for further analysis. 67% of respondents based in Ethiopia reported an increase in the actual ECR support at their institutions. Increases were also reported by large proportions of participants based in Nigeria (65%) and Tanzania (63%). 13% of respondents in Ghana and 13% based in Kenya reported a reduction in support, and 27% of respondents reported that there had been no support at all at their institution. As CIRCLE runs an active Institutional Strengthening Programme within CIRCLE institutions across the region, the fact that respondents are not aware of the support offered to ECRs in their institutions is of some concern and will be investigated in more detail in the future programme.

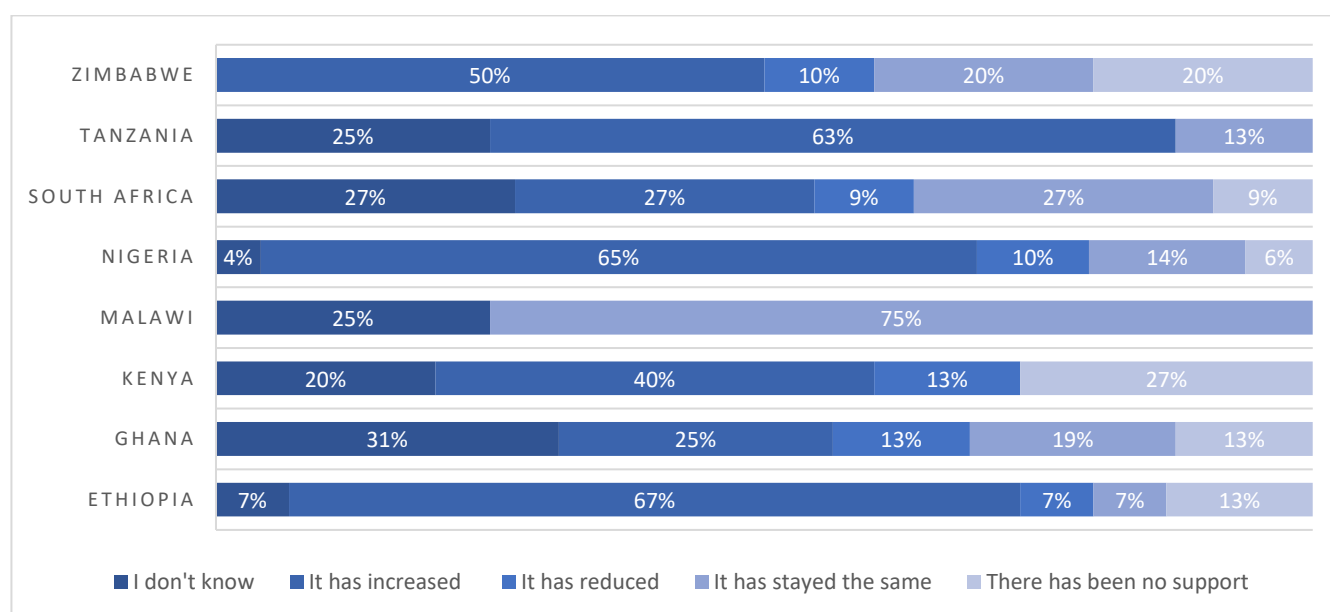


Figure 19 - Percentages of levels of conversation regarding ECR support by country

Non-CIRCLE institutions

7/41 (17%) of respondents based at institutions that were not affiliated with CIRCLE programme reported an increase in the actual support for ECRs over the last 12 months. 13/41 (33%) reported that it has remained the same. 11/41 (15%) reported that there had been no support at all.

Where there was more than one respondent per country, responses were divided by country for further analysis. Respondents from Kenya had the largest proportion of reported increased in communication. 67% of respondents from Cameroon reported that there had been no support at their institutions, and large percentages of respondents from Ghana (50%) and South Africa (50%) reported the same.

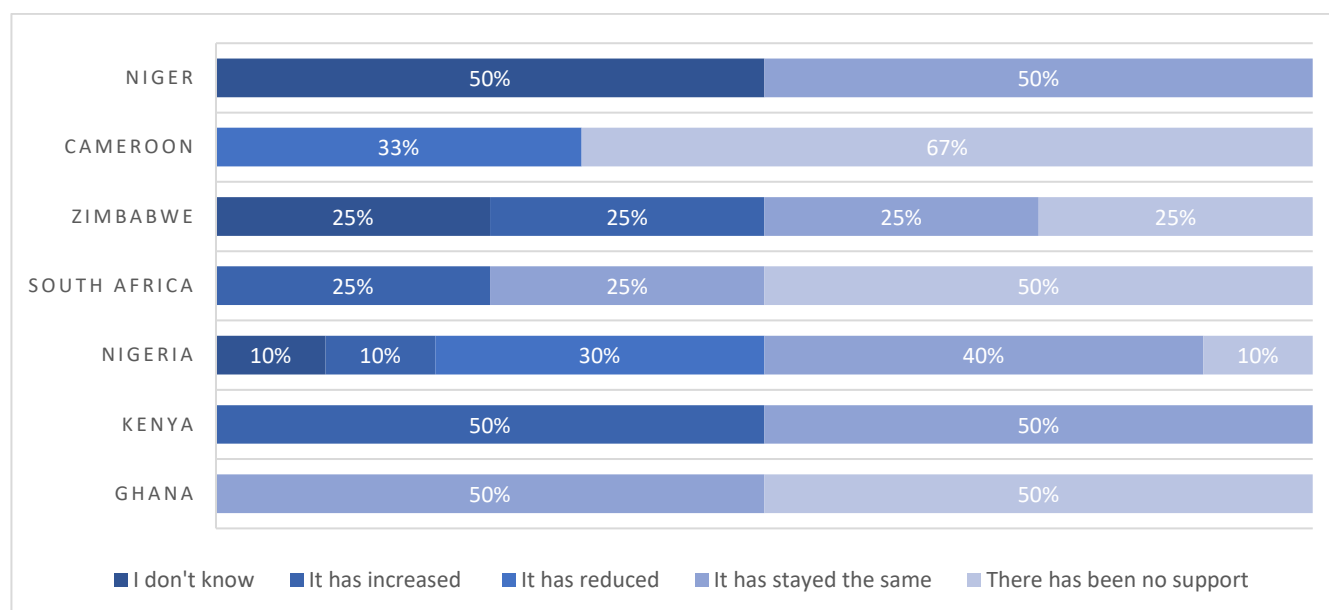


Figure 20 - Percentages of reported changes levels of actual ECR support by country

Proportions of respondents who reported an increase in the levels of communication were compared by country. As with the levels of communications reported above, it appears that the changes in levels of actual support for ECRs is similar in institutions in Ghana, regardless of whether or not they are affiliated with CIRCLE. Levels of discussion also appear similar at institutions based in South Africa. An increase in the level of actual support for ECRs based in institutions affiliated with CIRCLE was reportedly higher than those not affiliated with CIRCLE according to respondents based in Ethiopia, Nigeria, and Zimbabwe. There were two countries where reported increases in actual support was higher at institutions not affiliated with CIRCLE, and they were Kenya, as expected based on the above findings, and Tanzania.

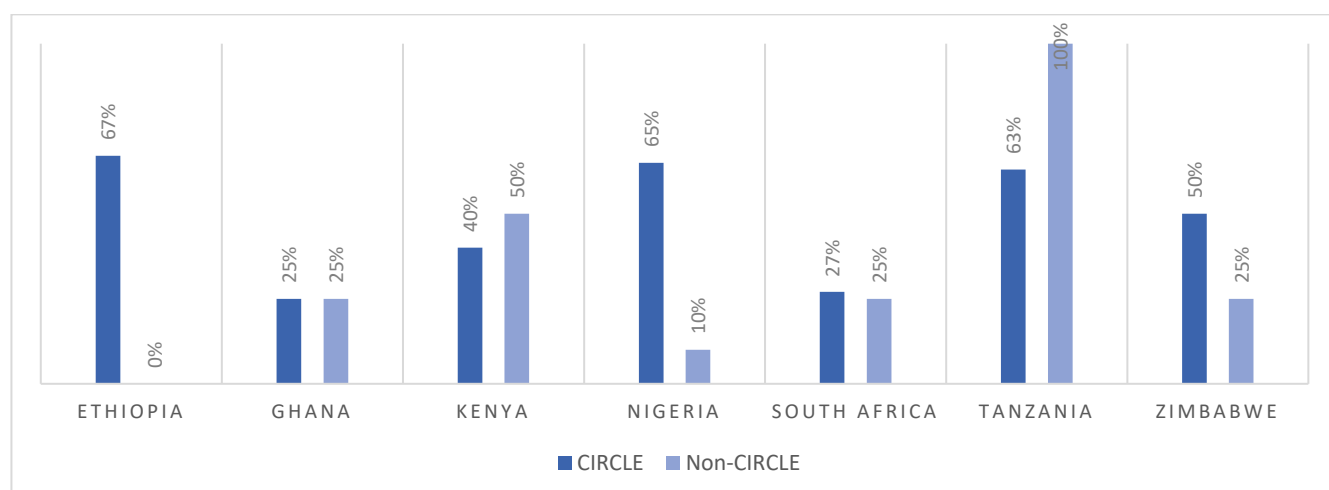


Figure 21 - Percentage of respondents who reported an increase in the level of actual ECR support at their institution by country

Summary

CIRCLE Fellows were publishing more high-quality journals, had a higher proportion of individuals involved in grant/funding applications, and were being accepted and/or invited to deliver a higher number of presentations at conferences and other events.

CVFs may be outperforming their peers as they were always high performing academics, hence their selection on to the programme. Or perhaps they are better able to turn training received into practical skills and opportunity.

What is clear is that the experience gained by CVFs is not being effectively shared with peers once the Fellowships have been completed, and expertise delivered in the programme is not being adequately institutionalised.

The CIRCLE programme will specifically be looking at how activities in the ISP are designed and delivered, and how they line up with activities delivered through the Fellowship programme. We will also be looking at ways to integrate the CVFs into our ISP programme and help institutions to identify areas where they are able to contribute.

The next steps for CIRCLE in a practical sense will therefore be to share findings from our Counterfactual and highlight the varying perceptions of support offered by institutions. We would also like to further investigate how far institutions have been able to make progress against their institutional action plans, and encourage institutions to flag areas for additional support, which isn't always easy to do.

This next stage of CIRCLE will also give us, as an organisation, some time to explore the wider networks within the ACU, as well as those externally, for other opportunities for support and perhaps to obtain further data on common issues facing early career researchers across the region.

The Association of Commonwealth Universities