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GEMS RESULTS MEASUREMENT HANDBOOK





This Handbook has been prepared by ITAD Ltd on behalf of the GEMS programme in Nigeria. For further information, please contact Tim Ruffer, Associate Director at ITAD: tim.ruffer@itad.com

www.gemsnigeria.com
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FOREWORD

The Growth and Employment in States (GEMS) project in Nigeria is responding to a number of fundamental monitoring, evaluation and reporting challenges. First and foremost, it is a large and complex project, implemented by different companies, across different states and sectors, with a very wide variety of interventions. Second, it makes use of the Making Markets Work for the Poor approach to economic development. M4P has been challenging the talents and persistence of M&E specialists and economists for some years, as they have tried to resolve issues of attribution, displacement and deadweight within fluid and massive market systems. Finally, the project is delivered in a period of global development practice dominated by demands for effective communication of results and value for money.

This Handbook responds directly to these challenges, and as a result, provides three main contributions to GEMS, and potentially to other M4P projects beyond Nigeria. First, it provides a set of definitions for key terms (the poor, 'income increase', employment etc) whose meanings we might think we understand, but which quickly unravel when two sets of results using different methods and measurements (and, crucially, different M&E specialists) are compared. The

unusual complexity of GEMS, notably its use of three main service providers, has forced the work to be particularly detailed and thoughtful, and should inform work in other, similar projects.

In addition to definitions, it provides a set of measurement standards and guidelines for each category of intervention in the project, whether focused on skills, introduction of new products and services, advocacy, business development services or business environment reforms. This categorization is a new approach to the quest for standardized practice. It avoids the restrictions of standardized indicators, but still allows for different projects to be held to account in a comparable and rigorous way.

Finally, the project has tried to respond to the fundamental problems of two approaches to evaluating M4P projects by combining them both in a new way. Typical M4P monitoring and evaluation practice is to focus on multiple intervention-specific studies which cannot easily deal with displacement and deadweight effects – that is, it cannot easily tell us whether the economic sector a project is working in (e.g. 'Nigerian construction', 'Kenyan tea') is really improving overall as a result of the project. Sector wide studies, with broad baselines using a randomized sample of firms, on

the other hand, cannot easily deliver attribution between any sector change, and an M4P type intervention. This Handbook, and the GEMS project, proposes both, combined in such a way to mitigate the limitations of each approach.

Several questions are unanswered, not least the cost trade-off of using the '3 step approach'. More work on definitions and categorization will be required to ensure consistency of usage. We therefore welcome the engagement of colleagues around the world as we see if the approach will have broader benefits for projects beyond Nigeria. We are already grateful for the work from ITAD, and for the insightful comments from colleagues across DFID, service provider companies, DCED and the World Bank. Subsequent iterations of this Handbook will benefit from an even broader consultation.

Richard Sandall
Lead Adviser, GEMS
December 2012

ABBREVIATIONS

BEE	Business Enabling Environment
BMO	Business Membership Organisation
DCED	Donor Committee on Enterprise Development
DFID	UK Department for International Development
FTE	full time equivalent
GBP	Great British Pound
GEMS	Growth and Employment in States
HNLSS	Harmonised Nigeria Living Standard Surveys
ICT	information and communications technology
ILO	International Labour Organisation
LoCC	League of Construction Companies
M&E	monitoring and evaluation
M4P	Making Markets Work for the Poor
NBS	National Bureau of Statistics
SMEDAN	Small and Medium Enterprises Development Agency of Nigeria

1

HANDBOOK PURPOSE



1 HANDBOOK PURPOSE

The purpose of this handbook is to provide GEMS with a consistent framework for capturing and reporting results and to ensure a coherent approach to results measurement across the programme.

DFID is required to report the results of GEMS to a wide range of stakeholders. It is therefore important that there is consistency in the definition and measurement of its achievements – to ensure that the results reported are credible and consistent, and that there is transparency in the measurement approaches that are applied. The application of this handbook is also intended to provide programme managers with a consistent framework to measure success and value for money and thereby provide information to guide management decisions such as whether interventions require amendment or are worthy of scaling up.

The handbook provides definitions and measurement standards, taking into account the wide spectrum of interventions included under GEMS. Whilst common definitions and approaches have been developed, the handbook has been designed to allow for flexibility to tailor approaches to individual interventions and contexts. The handbook does not provide comprehensive guidance for every type of intervention; project managers are required to adapt the guidance to their context, whilst ensuring that they maintain consistency with the definitions and measurement approaches provided.

The GEMS results measurement framework requires assessing changes that are attributable to an intervention. It is important that the GEMS deals with attribution – i.e. drawing causal links and explanatory conclusions about the relationship between observed changes (whether anticipated or not) and specific interventions. Attributing if, how, and how much a given intervention ‘caused’ a particular ‘effect’ are some of the most important questions for M&E, and some of the most difficult to answer. The handbook provides guidance on how to address these challenges.

The approach builds on, and is designed to be consistent with, the DCED Standard for Measuring Achievements in Private Sector Development (DCED 2010)¹. It should be used in conjunction with the DCED Standard guidelines, which contain more detailed guidance than this handbook on some aspects of the results measurement process. However, the handbook goes beyond the DCED Standard requirements in several significant ways:

- The handbook introduces a ‘3-Step approach’ to results measurement which combines ‘bottom-up’ and ‘top-down’ measurement to take account of displacement and deadweight loss in results measurement.
- GEMS requires the measurement of income outreach and value at the individual or household level, which goes beyond the minimum requirements of the DCED Standard’s ‘Universal Indicators’.
- This framework requires that a percentage is applied to scale results according to the estimated level of attribution that can be assigned to an intervention. The DCED Standard simply requires that contributions of other publicly funded programmes are acknowledged.

The handbook is structured as follows:

- | | |
|------------------|--|
| Section 2 | Strategic framework for GEMS. |
| Section 3 | Guidance on the measurement approach for GEMS components. |
| Section 4 | Standard definitions of the GEMS outcome and impact indicators. |
| Section 5 | Selecting measurement approaches. |
| Section 6 | How to address the attribution problem. |
| Section 7 | Data sources and collection methodologies. |

1. <http://www.enterprise-development.org/page/measuring-and-reporting-results>

2

GEMS STRATEGIC FRAMEWORK



2 GEMS STRATEGIC FRAMEWORK

GEMS is a partnership between the Federal Government of Nigeria, DFID and the World Bank, which aims to create income opportunities and jobs for poor Nigerians. GEMS is engaging in six sectors of the economy² and has an additional cross-cutting component which targets wider policy reform and strengthening of the business enabling environment. The seven components of GEMS are listed in Box 1.

In each component, GEMS is applying the 'Making Markets Work for the Poor' (M4P) approach.³ The approach is based on recognition that economic poverty is the result of the structure of market systems in which poor participate. When markets work efficiently and produce equitable outcomes for the poor, they are a powerful vehicle for delivering growth and poverty reduction. The approach aims to sustainably improve the lives of the poor by analysing and influencing market systems that

affect them as business people (in terms of higher margins, increased volumes and improved market access), consumers (in the form of better access to products and services, lower prices and wider choice) and employees (in the form of higher wages and improved working conditions). It works to identify the underlying causes, instead of symptoms, of why markets do not work for the poor. Its actions facilitate change to the behaviour, capabilities, incentives and relationships of market actors in order to:

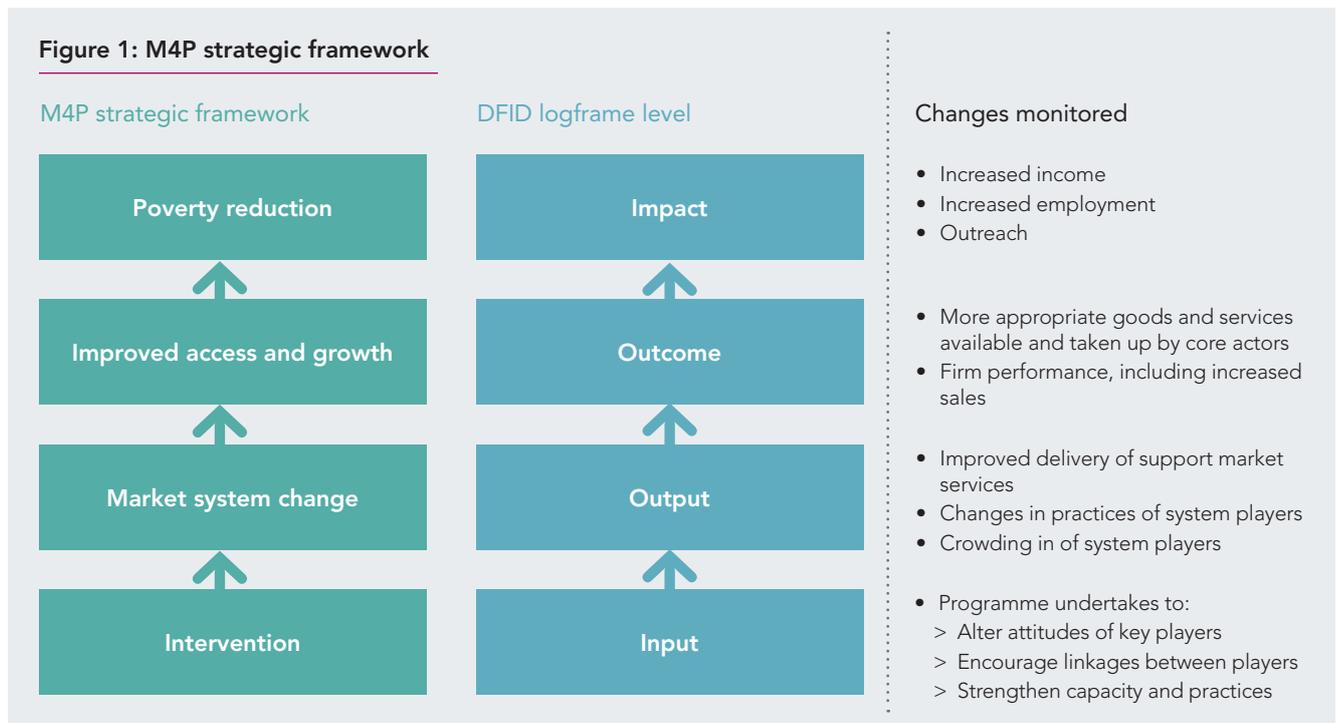
- improve target market systems, and
- create the conditions for markets to be continuously strengthened after the M4P 'intervention' is completed.

The strategic framework for M4P interventions is summarised in the simplified results chain in Figure 1. This illustrates the links between the logic of M4P interventions and a typical DFID logframe⁴.

Box 1: GEMS components

GEMS 1	Meat and leather
GEMS 2	Construction and real estate
GEMS 3	Business enabling environment and policy reforms
GEMS 4	Wholesale and retail trading
GEMS 5	Hospitality and tourism
GEMS 6	Entertainment
GEMS 7	Information and communications technology (ITC)

Figure 1: M4P strategic framework



2. As of December 2012, only GEMS 1–4 are fully operational.

3. For further details about the M4P approach, see www.m4phub.org

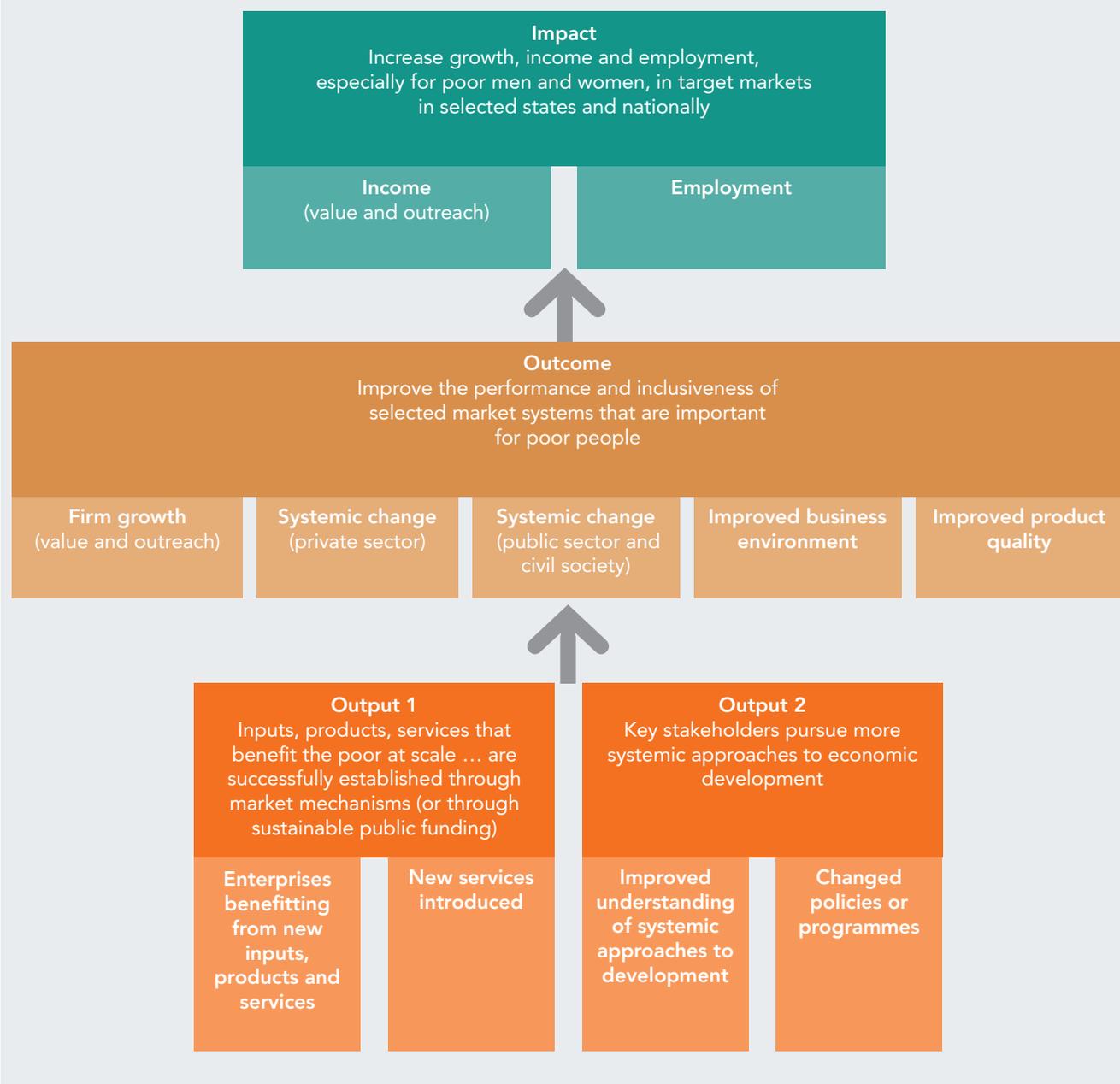
4. In addition to the logframe for GEMS components, intervention-specific results chains have been developed which include more levels and capture additional intervention-specific indicators. In results chains, one can better capture both quantitative and qualitative indicators of each single change. This is recognized and explored in Section 7 where several 'generic' results chains and associated measurement tools are developed for GEMS interventions.

The application of this framework to GEMS is presented in Figure 2, which encapsulates the output to impact levels of the GEMS logframe⁵. A summary of the 10 March 2012 version of the aggregated GEMS logframe (encapsulating the benchmarks from GEMS 1–3) is presented in Annex 1.

The GEMS **impact indicators** are defined consistently for all components (see Table 1). These indicators have some similarity with the DCED Standard ‘Universal Indicators’. However, they are not fully consistent, and the definitions used by GEMS imply a more ambitious level of measurement than the minimum standard specified by the DCED (see Table 2). The most important difference is that GEMS aims to measure income outreach and value at the individual or household level, which goes beyond the DCED Standard of measurement at the enterprise level. Detailed definitions of terms used in defining the indicators are provided in Section 4.

The GEMS **outcome indicators** are defined in a broadly consistent manner across the programme (see Table 3). GEMS 3 applies a slightly different results framework. The overall GEMS logframe, and GEMS 1 and 2 logframes, categorize results at four levels (inputs; outputs; outcome; and impact).

Figure 2: GEMS strategic framework



5. Figure 2 encapsulates the cross-GEMS logframe. It does not include the additional ‘intermediate impact’ level that is included in the GEMS 3 logframe.

Table 1: GEMS impact indicators

Impact	To increase growth, income and employment, especially for poor men and women, in target markets in selected states and nationally.
Impact indicator	Indicator definition
1: Income (outreach)	Number of people recording positive change in incomes.
2: Income (value)	Aggregated change in cumulative income (GBP).
3: Employment	Change in employment (FTE jobs).

Source: GEMS logframe

Table 2: Comparison of DCED Standard and GEMS impact indicators

DCED Standard 'Universal Indicator'	GEMS impact indicator
Scale: Number of target enterprises who realize a financial benefit as a result of the programme's activities per year and cumulatively. The programme must define its 'target enterprises'.	Income (outreach): Number of people recording positive change in incomes.
Net income: Net additional income (additional sales minus additional costs) accrued to target enterprises as a result of the programme per year and cumulatively. In addition, the programme must explain why this income is likely to be sustainable.	Income (value): Aggregated change in cumulative income (GBP).
Net additional jobs created: Net additional, full time equivalent jobs created in target enterprises as a result of the programme, per year and cumulatively. 'Additional' means jobs created minus jobs lost. 'Per year' comprises 240 working days. The programme must explain why these jobs are likely to be sustainable. Jobs saved or sustained may be reported separately.	Employment: Change in employment (FTE jobs).

Table 3: GEMS outcome indicators

Outcome	To improve the performance and inclusiveness of selected market systems that are important for poor people.
Outcome indicator	Indicator definition
4: Firm growth (outreach)*	Number of firms (including self employed) with increased sales
5: Firm growth (value)*	Increase in sales amongst targeted firms
6a: Systemic change and sustainability: private sector	Percentage of new or improved products and services, introduced through project facilitation, that are established in the market 12 months after project support has ended
6b: Systemic change and sustainability: public sector and civil society	Percentage of new or improved regulations or reforms, introduced through project facilitation, that are established in the market 12 months after project support has ended
7: Product quality	Improvements in product quality (variously defined by component)

* Defined at the 'intermediate impact' level for GEMS 3.

Source: GEMS logframe

GEMS 3 (business environment) has an additional level in its results framework and the hierarchy flows as follows: inputs; outputs; outcome; intermediate impact; impact. Some of the indicators (numbers 4 and 5) defined at the outcome level for the other components are categorised as 'intermediate impact' indicators for GEMS 3. Other outcome level indicators (numbers 6a, 6b and 7) are defined at the same (outcome) level for all components. GEMS 3 has additional indicators at the intermediate impact and outcome levels that are intended to encapsulate the individual nature of the GEMS 3 results framework (see Table 4).

Section 4 provides definitions of all GEMS indicators defined at the impact, intermediate impact and outcome levels: i.e. Indicators 1–7 in Table 1 and Table 3 and Indicators A–E in Table 4.

Table 4: Additional GEMS 3 indicators

Intermediate impact indicator	Indicator definition
A: Increase in firm level investment – outreach	Number of firms which invest
B: Increase in firm level investment – rate of increase	Percentage investment made by firms
C: Increase in retained earnings in targeted firms	Percentage increase over baseline of retained earnings
Outcome indicator	Indicator definition
D: Improved access to land, tax and investment services	Number of land registration, tax or other relevant targeted certificates received by target group
E: Improved Doing Business rating	Percentage improvement in Nigeria's absolute Doing Business rating

Source: GEMS logframe

3

MEASUREMENT APPROACH



3 MEASUREMENT APPROACH

3.1. A 3-Step approach to measuring and attributing change

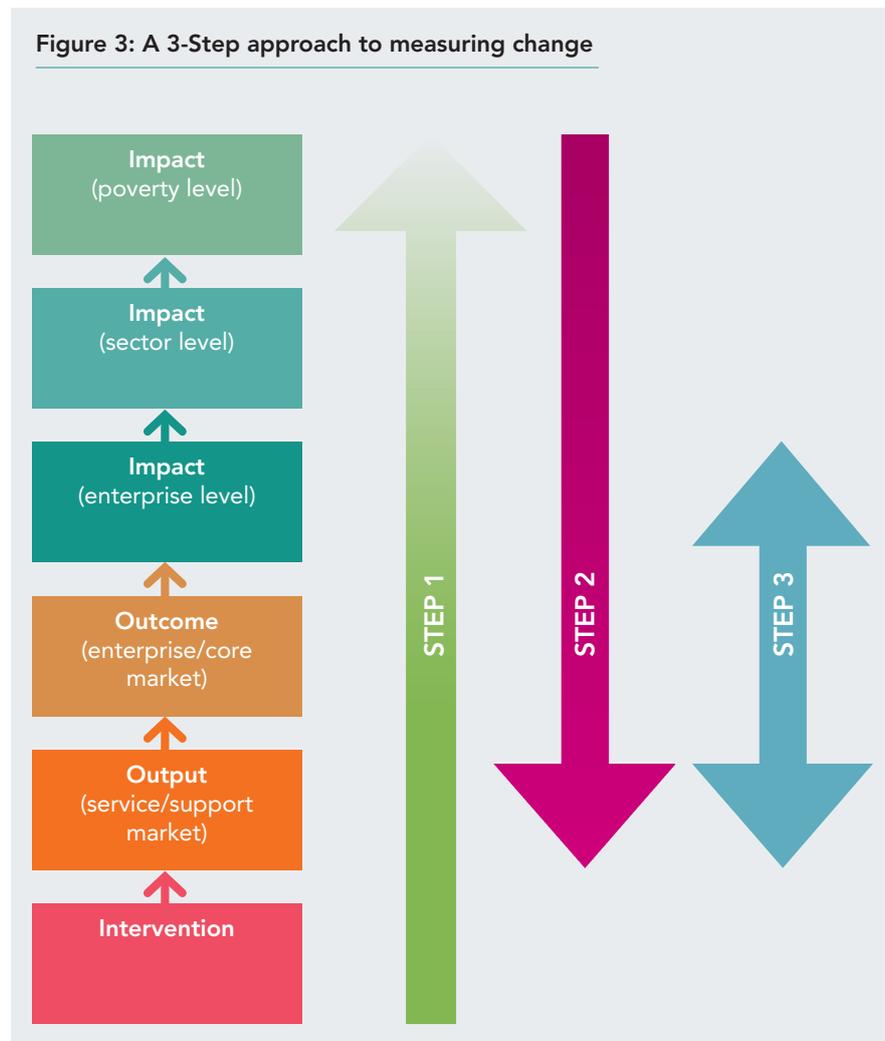
This section provides guidelines that have been designed to address the significant measurement challenges that are associated with M4P programmes in order to provide clear results based on credible evidence.

The effectiveness of GEMS interventions depends on complex interactions and feedback loops within their results chains. These various feedback loops often make it very difficult to follow and measure simple linear causal chains along a one-dimensional intervention logic from intervention to impact.

This suggests a need to split the measurement process into two parts to focus the assessments on relatively contiguous relationships in the results chain: i) upwards from GEMS interventions to outputs and outcomes at the market level; and ii) downwards from impact-level development results targeted by GEMS to outputs at the market level. This implies the application of a combination of 'bottom-up' and 'top-down' approaches to measuring and attributing change (see Figure 3).

Step 1: bottom-up measurement:

intervention-based monitoring is applied to assess whether and how interventions have achieved market level change and the extent to which this has led to an improvement in the performance and inclusiveness of the market system. It analyses the effects of interventions and their interaction with the context, including other market players and policy inputs. It measures the degree to which intervention activities have achieved their intended (and unintended) outputs and attempts to measure the degree to which intended outcomes have resulted.



Step 2: top-down measurement:

this step assesses the key changes in indicators at the impact level; and then assesses the factors at the market level that have driven this change.

Step 3: compare and triangulate findings:

this step analyses logical relations between GEMS interventions and development results (i.e. impact level indicators). This entails synthesizing and cross-checking the results of the previous two steps by focusing on the levels where the two steps come together at the output and outcome levels. It assesses the extent

to which the outputs and outcomes achieved by GEMS interventions (which are measured in Step 1. are consistent with the market-level factors that have driven changes in impact level indicators (measured in Step 2. This step allows summarising, synthesizing and double-checking of results. It is likely to be carried out through an iterative process by:

- synthesizing the results of Step 1 and Step 2, with a view to ensuring their comparability; and
- comparing the actual 'transitive relationship' between GEMS interventions and the impact-level results that they seek to achieve.

Step 1 broadly represents the typical M4P intervention-specific measurement approach. Step 2 is the equivalent of a sector wide survey, using a random sample of firms within a sector to detect sector wide changes that an intervention specific evaluation cannot provide (at least without risking overlooking deadweight and displacement). Step 3 is the process of further study that brings the results of steps 1 and 2 together.

Because this process includes both bottom-up and top-down measurement of change between the output and outcome levels, it provides triangulation of the evidence of change at this level. It also provides a reasonably robust approach to measuring attribution and minimizing self-importance bias.⁶ At the same time it recognises the difficulty of assessing the influence of GEMS interventions at outcome and impact levels without a broader understanding of sectoral social and economic performance.

The 3-Step approach is most likely to provide rigorous evidence that addresses biases inherent in the application of either the Step 1 or Step 2 approach on their own (see Box 2). The approach should enable displacement and deadweight loss associated with an intervention to be taken into account: Step 2 involves measurement of overall change to impact and outcome indicators which can be used to contextualise changes observed as a result of interventions through Step 1.

In the actual application of this approach, the scope and depth of the Step 2 – and its relative importance vis-à-vis Step 1 – will depend on the

Box 2: Measurement challenges

Bottom-up measurement	Top-down measurement
Risk of double counting impact across interventions.	Very challenging/costly to make surveys and quantitative analysis representative.
Risk that measurement will ignore deadweight loss and displacement.	Large attribution challenges – big jump between micro interventions and macro economy-wide impacts.
Difficult to account for impact of synergies across different components of a programme.	
Risk of 'self-importance bias' in estimating attribution.	
Large attribution challenges – big jump between micro interventions and macro economy-wide impacts.	

specific nature of interventions and the extent to which external factors need to be analysed in measuring the impact of GEMS. It may be possible in some cases to derive preliminary estimates of impact through Step 1, although the subsequent steps will normally be required to ensure that estimates take account of displacement and deadweight loss, and are triangulated.

Splitting the results measurement process into two separate steps (plus a third for crosschecking and conclusions), allows introduction of a significant methodological and practical distinction between the steps and permits the use of more appropriate methods for each part of

the measurement process. It aims to answer the following four questions:

- Have the key outcomes and impacts targeted by GEMS improved over the measurement period?
- What were the determining factors of those changes?
- Were those determining factors in turn influenced by GEMS interventions?
- How significant were each of these chains of influence?

The appropriate measurement tools for addressing each question will vary depending on the intervention and the context. Examples are provided in Annex 5.

6. This is arguably a common bias when measuring attribution in international development programmes: the relative importance of other contextual factors is often under-estimated. White and Phillips (2012) describe 'self-importance bias' as follows: "People are indeed the centre of their own universe; the problem comes when they think that they are also the centre of everyone else's universe, and as a result they overstate their role in events...it has been found that it is domestic political processes that actually drive policy change... so any account which ascribes a central role to external actors is likely to be overstating the importance of those actors."

3.2. Six stages of measurement

The guidance provided in this handbook focuses on the higher-level effects from GEMS interventions (at the impact and outcome levels). Approaches to measuring these higher-level effects should be careful to take account of the following commonly agreed requirements in impact assessment:

- Measurement should *estimate a given effect* (on final beneficiaries) from a particular cause.
- It is important to *measure attribution*, suggesting a direct link between a cause and an effect.
- Measurement should take *account of the counterfactual* – i.e. asking what would have happened without the intervention in making causal inference.

In addressing these factors, the GEMS results measurement approach follows six stages listed below, which are further elaborated in the remainder of this section. Each stage should apply the 3-Step approach. For example, the 'research questions' should be tailored to address bottom-up and top-down measurement questions; measurement methods differ for each step (Stage 5); and Step 3 requires specific indicators for Steps 1 and 2.

Stage 1: Articulate the results chain

For each GEMS component, and for specific interventions within the component, managers should establish and, wherever possible, agree with stakeholders a 'plausible' results chain that accurately reflects the ways in which GEMS will deliver or enhance the delivery of planned results. Discussions should focus on the type and nature of cause and effect relationships at each stage in the results chain, including:

- **Direct control:** where the GEMS intervention has fairly direct control of the results, typically at the output level.

- **Direct influence:** where the GEMS intervention has a direct influence on the expected results, such as the reactions and behaviours of its target groups through direct contact.
- **Indirect influence:** where the GEMS intervention can exert significantly less influence on the expected results due to its lack of direct contact with those involved and/or the significant influence of other factors. Channels of indirect influence include:
 - > **Crowding in:** other service providers start applying the practices of impacted programme 'beneficiaries,' by seeing the positive impact of programme activities on them.
 - > **Sector growth:** as a result of programme activities, the sectors in which it works grow; existing enterprises expand their businesses while 'new entrants' come into the market.
 - > **Backward and forward linkages:** changes at one point of the market trigger changes at other points along the value chain.

Because of the means by which GEMS seeks to achieve change, its interventions will frequently produce significant indirect and long term, and less easy to measure results.

Stage 2: Define the 'research questions'

The key questions and hypotheses to be tested during the results measurement process (the 'research questions') should be generated from the causal models articulated in the results chains, covering both Step 1 and Step 2 of the measurement process. Figure 4 shows where the 3 Steps can be applied in the generic GEMS strategic framework. The 'generic' research questions for GEMS can be drawn from this (see Box 3). More specific research questions will need to be tailored to individual interventions.

Stage 3: Define indicators of change

The impact and outcome indicators of change, whose measurement this handbook focuses on, are already defined in the GEMS logframe. Indicators associated with the intervention-specific results chains should, wherever appropriate, be consistent with these indicators, although it is likely to be the case that additional intervention-specific indicators will need to be developed.

Box 3: 'Generic' research questions for GEMS

Step 1

- What have been the direct outputs from GEMS interventions?
- What changes have occurred at the service/support market level? To what extent can these be attributed to GEMS? What have been the other causal factors?
- To what extent have the service/support level market changes led to an improvement in the performance and inclusiveness of the core market system?

Step 2

- How have the level and composition of income and employment changed (in the relevant sector/state)?
- What market-level factors have led to the changes in income and employment?
- What have been the causes of any changes in market level factors?

Step 3

- To what extent can the market level changes observed in Step 2 be attributed to GEMS interventions?

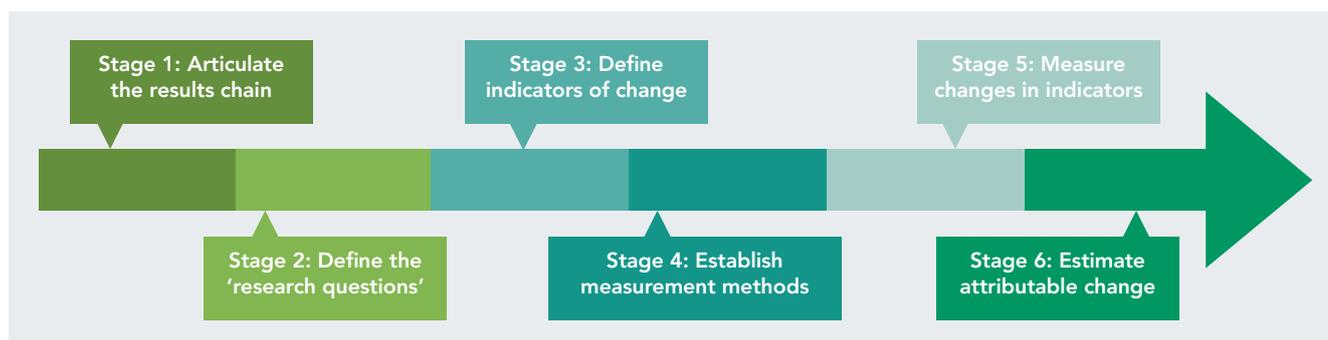
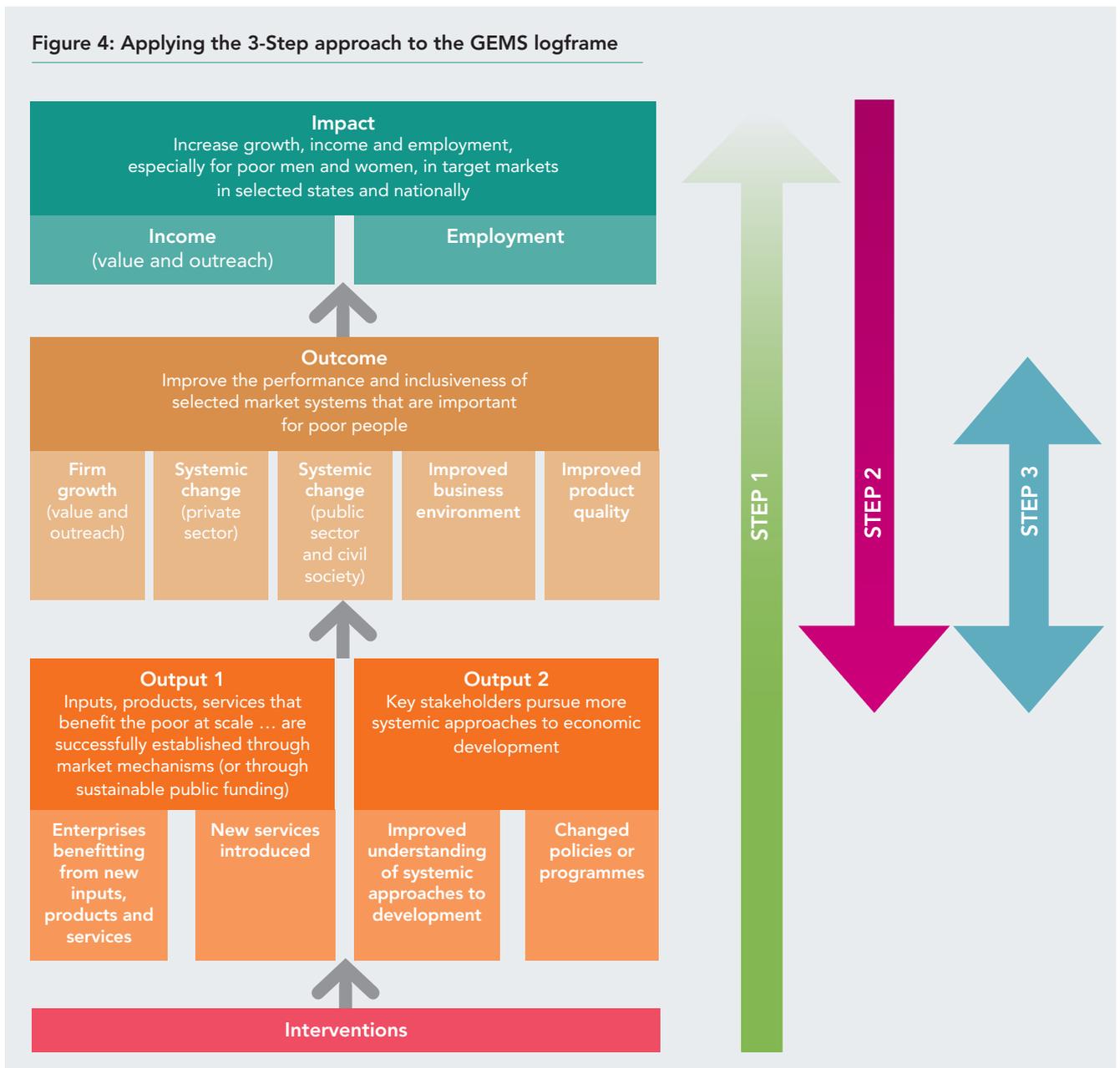


Figure 4: Applying the 3-Step approach to the GEMS logframe



Stage 4: Establish measurement methods

Measurement methods should be based on an evaluability assessment. Different combinations of measurement approaches will be appropriate for the three steps. Further guidance on the selection of measurement approaches is provided in Section 5.

Stage 5: Measure changes in indicators

Measurement should allow for analysis of 'impact heterogeneity', including sub-group analysis by gender and poverty status as appropriate for the intervention. It should capture both positive and negative effects. Annex 5 provides guidance on how changes in indicators over time can be measured for specific types of intervention. Data sources and collection methods are considered in Section 7.

Stage 6: Estimate attributable change

Stage 6 involves an examination of the validity of the causal linkages in the results chain and the evidence to support them, which should be used to build a story of plausible attribution. Based on this analysis, a percentage should be assigned to the extent to which the measured change can be attributed to the GEMS intervention. Further guidance is provided in Section 6 and by the DCED.⁷

7. <http://www.enterprise-development.org/download.aspx?id=2012>

4

DEFINING INDICATORS OF CHANGE



4 DEFINING INDICATORS OF CHANGE

This section provides guidance on the definition and measurement of all GEMS impact and outcome indicators. In addition, the table below⁴ provides guidance on the definition and measurement of poverty – because the GEMS results framework requires that impact indicators are disaggregated between poor and non-poor.

Indicator	Poverty
Definition	<p>The poverty line is defined as ₦66,000 per capita in 2010 prices⁸. In 2012 prices, this is equivalent to ₦82,404⁹. For each region, the General Household Survey data presented in Annex 4 should be applied to derive from this an estimate of the average level of income per worker required to keep his/her household above the poverty line.</p> <p>For example, for Kano (which is in the NW Zone), the average household size is 6.75, meaning that the income required to keep the average household above the poverty line in 2012 is:</p> $₦82,404 \times 6.75 = ₦556,227$ <p>45.3% of the household is of a working age of 15 to 65, meaning that on average, each worker will require a net annual income¹⁰ of:</p> $₦556,227 / (6.75 \times 0.453) = ₦181,907$ <p>Equivalent calculations for other zones in Nigeria are provided in Annex 4.</p>
Units of measurement	<p>The unit of measurement is the annual net income per working person. To derive this figure from a daily wage, it should be assumed that a working person engages in productive work for 240 days per year.</p> <p>Income is defined as the amount of money received for labour, for services, from the sale of goods or property, or from investments.</p> <p>Non-cash income should be assigned a monetary value at current market prices and included in income calculations.</p>
Exclusions	n/a

8. This is based on World Bank (2010), which applies several methods to derive the absolute poverty line for Nigeria using data from the HNLSS. The results derived were consistent: at around ₦66,000 per annum in 2010 prices. This is calculated by combining the cost of a national food basket required to deliver 3,000 Kcal per person to day and adding a non food component.

9. Applying a deflator derived from the average *All Items CPI* for January to August 2010 and January to August 2012.

10. i.e. annual income after tax.

Indicator 1	Income (outreach)
Definition	<p>Net number of income earners recording a positive change in incomes.</p> <p>Income is defined as the amount of money received for labour, for services, from the sale of goods or property, or from investments.</p> <p>Where an individual receives income from multiple sources, the unit of measurement is the earnings from the income stream targeted by the GEMS intervention.</p> <p>Non-cash income should be valued at current market prices and included in income calculations.</p> <p>A positive change in income is defined as 15% or more in real Naira terms within the GEMS component implementation period.</p> <p>An increase in income should be additional, which is defined by the HMT Green Book as <i>'an impact arising from an intervention is additional if it would not have occurred in the absence of the intervention'</i>.</p>
Units of measurement	<p>Disaggregate between:</p> <ul style="list-style-type: none"> • Formal and informal. See Annex 2 for a definition of informal employment. • Employees and self employed/family business members. • Male and female. • Poor and non-poor. • Direct and indirect impacts. See page 11 for further specification of the distinction. <p>Take account of deadweight loss in calculations. Displacement should be considered¹¹ and, wherever possible, calculated (through the 3-Step approach). As a minimum, an evidence-based statement of possible displacement effects should be included as part of the results measurement process. The geographical limit for displacement estimates is Nigeria.</p>
Exclusions	n/a

11. The DCED Standard requires that programmes should "cite or produce evidence that displacement has been taken into account in the development of the results chain(s)". "Research should consider likely displacement within and outside the value chain i.e. where non target groups suffer because the target group benefits. To assess this, programmes will need to consider whether the markets are involved are shrinking, static or growing. Displacement will be far higher in shrinking and/or saturated markets".

Indicator 2	Income (value)
Definition	<p>Net aggregated change in cumulative income (Naira) accrued by individuals as workers.</p> <p>Income is defined as the amount of money received for labour, for services, from the sale of goods or property, or from investments.</p> <p>Non-cash income should be valued at current market prices and included in income calculations.</p> <p>Includes both people who enter the sector through job creation and people who are already in the sector.</p> <p>An increase in income should be additional, which is defined by the HMT Green Book as <i>'an impact arising from an intervention is additional if it would not have occurred in the absence of the intervention'</i>.</p>
Units of measurement	<p>Average over a twelve month period.</p> <p>Disaggregate between:</p> <ul style="list-style-type: none"> • Formal and informal. See Annex 2 for a definition of informal employment. • Employees and self employed/family business members. • Male and female. • Poor and non-poor. • Direct and indirect impacts. See page 11 for further specification of the distinction. <p>Take account of deadweight loss in calculations. Displacement should be considered and an evidence-based statement of possible displacement effects should be included as part of the results measurement process. The geographical limit for displacement estimates is Nigeria.</p>
Exclusions	<p>Exclude unpaid family labour.</p> <p>Apprenticeships should be excluded from the calculations except for where there is evidence that the apprenticeship has been established with the primary purpose of addressing a labour shortage rather than to fulfil a training need. Where included, apprenticeship calculations should be disaggregated from other income generating activities.</p>

Indicator 3	Employment
Definition	<p>Change in employment (FTE jobs)</p> <p>Net additional, full time equivalent jobs created in target enterprises as a result of the programme, per year and cumulatively by persons over the age of 15.</p> <p>'Additional' means jobs created minus jobs lost.</p> <p>'Per year' comprises 240 working days of eight hours.</p> <p>A job is sustained when the position, or FTE equivalent, has been in existence for 12 months or more. The programme should explain why jobs are likely to be sustainable beyond the lifetime of the intervention.</p> <p>Jobs saved or sustained may be reported separately.</p> <p>Only include work that is paid at a minimum in excess of the poverty line (see poverty indicator above). Non-cash income should be valued at current market prices and included in income calculations.</p>
Units of measurement	<p>Full time equivalent (FTE). Seasonal jobs may be counted so long as they are included on a pro rata basis (i.e. a 3 month full time job = 0.25 FTE).</p> <p>The maximum FTE value for a single job is 1, even if more than 240 days (or 8 hours per day) are worked.</p> <p>A job should not be counted again if it is filled over time by different people.</p> <p>Disaggregate by:</p> <ul style="list-style-type: none"> • Poor and non-poor: estimate proportion of jobs that are created which are provided to people who were 'poor' before entering employment. • Formal and informal employment: see Annex 2 for a definition of informal employment. • Employees and self employed/family business members. • Male and female. • Direct and indirect impacts. See page 11 for further specification of the distinction. <p>Take account of deadweight loss in calculations. Displacement should be considered and an evidence-based statement of possible displacement effects should be included as part of the results measurement process. The geographical limit for displacement estimates is Nigeria.</p>
Exclusions	<p>Jobs are generally excluded where associated with businesses moving from other parts of Nigeria. An exception to this is where the relocation can be demonstrated as genuinely safeguarding the job(s) concerned (i.e. the job(s) would have been lost at the original location).</p> <p>Exclude unpaid family labour, forced labour and child labour.</p> <p>Apprenticeships should be excluded from the calculations except for where there is evidence that the apprenticeship has been established with the primary purpose of addressing a labour shortage rather than to fulfil a training need. Where included, apprenticeship calculations should be disaggregated from other income generating activities.</p>

Indicator 4	Firm growth (outreach)
Definition	Net number of firms (including-self employed) with increased sales. Sustained increase in sales is when a business can demonstrate an increase to its turnover over a minimum of a 12 month period.
Units of measurement	Disaggregate between: <ul style="list-style-type: none"> • Micro, small, medium and large enterprises (following SMEDAN definitions¹²). • Formal and informal. • Male/female managed or owned firms. • Direct and indirect effects.
Exclusions	n/a

Indicator 5	Firm growth (value)
Definition	Net annualised increase in sales amongst firms (Naira).
Units of measurement	Disaggregate between: <ul style="list-style-type: none"> • Micro, small, medium and large enterprises (following SMEDAN definitions¹³). • Formal and informal. • Male/female managed or owned firms. • Direct and indirect effects. See page 11 for further specification of the distinction.
Exclusions	n/a

Indicator 6a	Systemic change and sustainability: private sector
Definition	Percentage of jobs and income opportunities created by GEMS that can be attributed to private sector interventions that are sustainable.
Units of measurement	<p>'Intervention' is defined as <i>"an activity or series of activities designed to achieve a specific change in the support functions/market or a set of activities designed to achieve the sustainable delivery of a new or improved service or output that, through its use by the target group, will result in improved business environment and contribute to increased incomes for that target group"</i>.</p> <p>'Private sector intervention' is defined as <i>"improved products, services, relationships and technologies introduced through project facilitation"</i>.</p> <p>'Sustainable intervention' is defined as one that remains established in the market 12 months after project support has ended.</p>
Exclusions	n/a

12. & 13. SMEDAN applies the following definitions: micro enterprise – up to 9 employees; small enterprise – 10–49 employees; medium enterprise – 50–199 employees; large enterprise – over 200 employees.

Indicator 6b	Systemic change and sustainability: public sector and civil society
Definition	Percentage of jobs and income opportunities created by GEMS that can be attributed to public sector and civil society interventions that are sustainable.
Units of measurement	<p>'Intervention' is defined as "an activity or series of activities designed to achieve a specific change in the support functions/market or a set of activities designed to achieve the sustainable delivery of a new or improved service or output that, through its use by the target group, will result in improved business environment and contribute to increased incomes for that target group".</p> <p>'Public sector and civil society intervention' is defined as new or improved regulations or reforms introduced and established that are enabled or facilitated through GEMS, and improve market conditions and promote inclusiveness.</p> <p>'Sustained intervention' is defined as one that remains established in the market 12 months after project support has ended.</p>
Exclusions	n/a

Indicator 7	Improvements in product quality
Definition	Improvements in product quality defined individually by components.
Units of measurement	n/a
Exclusions	n/a

GEMS 3-specific indicators

Indicator A	Increase in firm level investment – outreach
Definition	<p>Number of firms which undertake new investment as a result of improvements in the business environment facilitated by GEMS.</p> <p>Investment is defined as increase in non-labour assets adjusted for depreciation and GDP growth.</p>
Units of measurement	<p>Disaggregate between:</p> <ul style="list-style-type: none"> • Micro, small, medium and large enterprises (following SMEDAN definitions¹⁴). • Male/female managed or owned firms. • Direct and indirect effects. See page 11 for further specification of the distinction.
Exclusions	n/a

14. See footnote 11.

Indicator B	Increase in firm level investment – rate of increase
Definition	<p>Annualised investment made by firms as a result of improvements in the business environment facilitated by GEMS.</p> <p>Investment is defined as increase in non-labour assets adjusted for depreciation and GDP growth.</p>
Units of measurement	<p>Investment as percentage of turnover.</p> <p>Disaggregate between:</p> <ul style="list-style-type: none"> • Micro, small, medium and large enterprises (following SMEDAN definitions). • Formal and informal. • Male/female managed or owned firms. • Direct and indirect effects. See page 11 for further specification of the distinction.
Exclusions	n/a

Indicator C	Increase in retained earnings in targeted firms
Definition	<p>Net annualised increase in retained earnings as a result of improvements in the business environment facilitated by GEMS.</p> <p>'Retained earnings' is defined as net earnings not paid out as dividends, but retained by the company to be reinvested in its core business or to pay debt.</p> <p>Retained earnings is calculated by adding net income to (or subtracting any net losses from) beginning retained earnings and subtracting any dividends paid to shareholders:</p> <p>Percentage increase over baseline of retained earnings.</p>
Units of measurement	<p>Disaggregate between:</p> <ul style="list-style-type: none"> • Micro, small, medium and large enterprises (following SMEDAN definitions). • Formal and informal. • Male/female managed or owned firms. • Direct and indirect effects. See Paragraph 25 for further specification of the distinction.
Exclusions	n/a

Indicator D	Improved access to land, tax and investment services
Definition	<p>Number of land registration, tax or other relevant targeted certificates received by target group.</p> <p>To be further defined by GEMS 3 as interventions evolve.</p>
Units of measurement	Compliance certificates, land registration certificates and certificates of registration as a formal company.
Exclusions	n/a

Indicator E	Improved Doing Business rating
Definition	<p>Percentage improvement in Nigeria's absolute Doing Business rating</p> <p>Notes: indexed by GEMS 3; baseline = 100</p>
Units of measurement	<p>See http://www.doingbusiness.org/methodology</p> <p>Disaggregate by each of the ten doing business categories used in the rating.</p>
Exclusions	n/a

5

SELECTING MEASUREMENT APPROACHES



5 SELECTING MEASUREMENT APPROACHES

5.1. Applying a mixed methods approach

In measuring the results of GEMS interventions, two common factors need to be taken into account:

- **The extended and complex nature of the impact pathways in GEMS.** As acknowledged in the DCED Standard, demonstrating that interventions cause development effects depends on providing evidence to verify the causal claims made in the results chain of the programme or intervention.
- **It is often not possible to fully isolate the effect of a GEMS intervention** from the possible multitude of factors which might have an influence on the outcome of interest. Most GEMS interventions are 'contributory causes': they work as part of a causal package in combination with other 'helping factors', including stakeholder behaviour, related programmes and policies, institutional capacities, cultural factors, and socio-economic trends.

As a result, in most cases, a **theory-based measurement approach that applies mixed methods** is likely to be the most suitable – both in providing convincing evidence of impact and in explaining why changes occurred and how they varied across circumstances. It is important to try to spell out a counterfactual and rule out alternative explanations as much as possible. Where a counterfactual scenario cannot be made, credible impact assessment needs to be built around the results chains of the programme and individual interventions – that allows users to demonstrate the causal links proposed.

Rather than selecting one method, programmes should aim to use a range of tools to collect and analyse the necessary data; information generated by mixed methods can help to establish the validity of the data and the reliability of the measures of change. However, it is not necessary to use a different tool for each indicator, in fact, it is important to group the indicators together and collect data on as many as possible with the same tool or tools. This will make the data collection both

manageable and efficient. Programmes should balance the use of appropriate tools with keeping the overall results measurement process affordable and manageable.

The measurement of different stages in the results chain will be amenable to different measurement approaches. A mixture of quantitative and qualitative data is likely to be required to build credible evidence of the links and attribution between GEMS interventions and impact-level indicators of employment and income generation. The tools applied should include some combination of the methods listed in Box 4.

The sheer complexity of GEMS interventions means that there will always be limits to the accuracy of estimates of impact. This does not suggest that results measurement is not valuable. But it does imply that caution is required in expectations of precision. It is important that GEMS is transparent about the margins of error in its results measurement.

Box 4: Menu of measurement methods

1. Quantitative methods

- Before versus after the intervention.
- 'With and without' comparison.
- Quasi-experimental approaches such as difference in difference analysis.
- Regression analysis.
- Experimental methods such as randomized controlled trials.

2. Qualitative methods

- Key informant interviews (KII) to examine the quality of the results achieved, the main contributing factors to this achievement, the validity of the results chain and the relationship between risks, assumptions and performance.
- Focus groups with beneficiaries and specific target groups (as for KII).
- 'Comparative case studies' to assess 'with and without' intervention scenarios.
- 'Outcome Harvesting' to collect evidence on what has been achieved and work backwards to determine whether and how the project or intervention contributed to this change.
- 'Most Significant Change' to collect stories emanating from the field level, and then the systematic selection of the most significant of these stories by panels of designated stakeholders allowing whole teams of people to focus their attention on programme impact.

5.2. Selecting measurement methods

The overall results measurement objectives and the specific research questions that need to be answered are important factors in deciding which measurement approach(es) to use. Measurement objectives and research questions should be developed from the results chain. The appropriate combination of methodologies will also depend on the nature of the intervention and the context in which it is taking place. Considerations include those set out in Table 5.

Table 6 provides guidance on how these evaluability questions should be considered in the context of the generic research questions for GEMS. Further guidance on results measurement for specific 'intervention types' is provided in Annex 5.

Table 5: Evaluability considerations and questions

Considerations	Questions
Objectives	<ul style="list-style-type: none"> Does the intervention have clear objectives/outcomes it aims to achieve? Are these aims – or at least some key ones – defined and measurable?
Counterfactual	<ul style="list-style-type: none"> Do we know what is the target population/s is/are? Is the target population pre-selected or self-selecting? Can we identify the population being treated? Are the characteristics of the treatment group known? Can a comparison group with matching characteristics be created? Are members of the comparison group likely to become members of the treatment group during the course of the evaluation? Can we identify untreated businesses that may be affected by spill overs from the treatment? Where a comparison group cannot be identified (which makes 'with and without' comparison unfeasible), what alternative measures of the counterfactual are feasible?¹⁵
Treatment	<ul style="list-style-type: none"> Can we specifically define the treatment? Are there identifiable mechanisms through which the results are expected to be attained? Is the treatment uniform in relevant respects for all participants? Is the provision of the intervention limited in some way – by geography, or type of firm? What is the number of units in the treatment and comparison groups?
Complexity	<ul style="list-style-type: none"> To what extent are there other 'contributory causes' to the achievement of the results?
Significance	<ul style="list-style-type: none"> How significant is the intervention in terms of the identifiable change it represents?
Cost	<ul style="list-style-type: none"> Cost and effort needs to be proportionate to the size of the intervention, its importance, and the value of the information that the measurement process will provide.

15. Comparison groups are particularly difficult to identify for complex interventions or when the number of observations or case studies is small (common circumstances in GEMS). Where this is the case, there are other useful approaches to measuring the counterfactual which, depending on the situation, may be appropriate: e.g. simulation modeling; cross-sectional comparison; cohort studies; case control studies; looking for frequency of association between cause and effect; and/or association and analysis of multiple combinations of causes (for example, qualitative comparative analysis).

Table 6: Measurement design and methods selection framework

Step 1 – Intervention to market system change (support and core markets)

Research question	Contextual factors to consider in measurement	Implications for measurement design and methods
EQ1.1 What have been the direct outputs from GEMS interventions?	<ul style="list-style-type: none"> • ‘Outputs’ in the GEMS logframe and DCED Standard are set at a high level – i.e. at market-level change that often lies beyond the direct influence of GEMS. • Measurement should start with the ‘direct’ outputs. 	<ul style="list-style-type: none"> • Monitoring data, based on intervention manager observations and key informant interviews is likely to provide the required information. • Construction of intervention-relevant baseline data capturing the initial situation in relation to beneficiaries prior to the project start. • Where possible, specification of a counterfactual – comparison group to facilitate comparison of ‘with’ project and ‘without’ project scenarios. • Qualitative data gathering through interviews, focus group discussions and consultations with key market players to provide a lens to explore how the interventions are delivering change.
EQ1.2 What changes have occurred at the service/support market level?	<ul style="list-style-type: none"> • To what extent has there been a change in the service/support market? 	<ul style="list-style-type: none"> • Market analysis of the service support market (demand and supply analysis). • Qualitative data gathering through interviews, focus group discussions and consultations with key market players to examine the changes taking place.
To what extent can these changes in the service/support market be attributed to GEMS?	<ul style="list-style-type: none"> • Can we define the treatment and the pathways through which the results are expected to be attained? Challenges may result from the indirect, dynamic and flexible nature of many GEMS interventions. • Can a comparison group with matching characteristics be created? • Is there likely to be spill-over and contamination between the treatment and comparison group? • What is the number of units in the treatment and comparison groups? 	<ul style="list-style-type: none"> • A theory-based measurement approach requires definition of the treatment and results pathways. However experimental and quasi-experimental methods can measure change in the absence of a definition of the results pathways. • If feasible, propensity score matching may enable the construction of a comparison group required for ‘difference in difference’ analysis. • Contamination will limit or mitigate the feasibility of experimental or quasi-experimental methods. • This will affect the extent to which survey data is representative.
What have been the other causal factors?	<ul style="list-style-type: none"> • To what extent are there other ‘contributory causes’ to the achievement of the results? • To what extent are there likely to be multiple benefits or ‘unintended consequences’? • How significant is the intervention, in terms of the identifiable change it represents? 	<ul style="list-style-type: none"> • Other contributory causes need to be recognised in the results chain and ‘controlled for’ in impact measurement. • Measurement design needs to look for and take account of unintended consequences of market interventions. • The significance of anticipated change as a result of the intervention affects the extent to which sample sizes are representative. Survey design needs to take account of this.
EQ1.3 To what extent have the service/support level market changes led to an improvement in the performance and inclusiveness of the core market system?	<ul style="list-style-type: none"> • Are the core market systems aims – or at least some key ones – defined and measurable? • Are the core market system beneficiaries identifiable, or is the change more system-wide? Are the beneficiaries pre-selected or self-selecting? • Can we define the treatment and the pathways through which the results are expected to be attained? • To what extent are there other ‘contributory causes’ to the achievement of the results? • How significant is the service/support level market change, in terms of the identifiable change it represents in generating change in the core market’s performance and inclusiveness? 	<ul style="list-style-type: none"> • Aims should wherever possible be defined and measurable as a benchmark against which to measure change. • If beneficiaries can be identified and pre-selected, experimental or quasi-experimental methods are more likely to be feasible. • Challenges may result from the indirect, dynamic and flexible nature of many GEMS interventions. • Other contributory causes need to be recognised in the results chain and ‘controlled for’ in impact measurement. • The significance of anticipated core market system change affects the extent to which sample sizes are representative. Survey design needs to take account of this.

Table 6: Measurement design and methods selection framework

Step 2 – Changes in income and employment in core market

	Research question	Contextual factors to consider in measurement	Implications for measurement design and methods
EQ2.1	How have the level and composition of income and employment changed (in the relevant sector/geographic area)?	<ul style="list-style-type: none"> Do results include data on other characteristics of the population – to enable matching etc? How regular and reliable are secondary data sources (e.g. household surveys)? 	<ul style="list-style-type: none"> General Household Survey and HNLSS undertaken by NBS provide infrequent estimates of income and employment. Alternative data sources are likely to be required. Cross-GEMS enterprise survey.
EQ2.3	What have been the causes of any changes in market conditions?	<ul style="list-style-type: none"> What are the key drivers of improvements in firm performance and employment? What are the key trends in the core market and what are the underlying causes? 	<ul style="list-style-type: none"> Qualitative analysis of data on the composition of economic growth and the evolution of poverty and inequality. Documentary analysis. Interviews and focus group discussions. Regression analysis/Difference-in-Difference analysis. Employment surveys.

Step 3 – Compare and triangulate findings – linking core market changes to GEMS

	Research question	Contextual factors to consider in measurement	Implications for measurement design and methods
EQ3.1	To what extent can the market level changes observed in Step 2 be attributed to GEMS interventions?	<ul style="list-style-type: none"> Taking the impact of GEMS on the support market, and knowing the changes taking place in the core market, can we distil with some degree of confidence what elements of the changes in the latter are due to GEMS. For some GEMS interventions, it may be possible to use overall intervention to impact measurement techniques in some cases (i.e. not the 3-Step process). In most cases the 3-Step process will be a preferable approach due to limitations of any single method in measuring the links between interventions and impact. The 3-Step process should be used to carefully assess the extent to which estimates derived through Step 1 are picking up displacement and deadweight loss. 	<ul style="list-style-type: none"> Triangulation of the findings from Steps 1 and 2 to build the evidence that the changes in the services/support market due to GEMS have: <ul style="list-style-type: none"> > <i>plausibly</i> resulted in changes in business performance in the core market which in turn have > <i>plausibly</i> resulted in quantifiable changes in levels of employment and income for poor people. Analysis of the actual 'transitive' process between GEMS interventions and the impact-level results. Application of qualitative methods, such as Most Significant Change techniques.

5.3. Aggregating results

In aggregating results across interventions, the following factors should be taken into account which, if not dealt with carefully, may compromise the integrity of the results reported:

- Many indicators may be defined in different ways in different contexts. This may result in the aggregation of inconsistent units.
- There is a risk of double counting between interventions and components – e.g. at the impact level between employment and income effects
- By aggregating results from individual interventions or components, there is a risk that the impact of synergies between programme parts are missed.

Therefore, when aggregating data, GEMS teams should identify interventions that have overlapping beneficiaries and properly account for this. Component-wide results chains should be developed to help identify overlaps between interventions, and to illustrate the influence of external causal factors (including other GEMS components). GEMS should collectively map the beneficiaries of interventions and their geographical locations to identify overlaps. After identifying overlaps, figures should be corrected by counting only once the beneficiaries that have been reached by more than one intervention.

The consistent application of the definitions provided in this handbook, combined with the 3-Step approach to measurement should enhance the integrity of aggregated results.

The DCED offers the guidance in Box 5 on the treatment of overlaps.

Similarly, due to the way that impact indicators are defined in GEMS, there is a strong possibility that the creation of a new employment opportunity could be counted twice – as a job and as an increase in income for an individual. This would happen, for example, where an individual who was previously working informally and receiving earnings below the poverty line acquires a newly created job that moves her above the poverty line. GEMS components should be aware of the likelihood of such double counting and estimate what proportion of jobs and income outreach estimates that are reported contain overlaps.

Box 5: Measurement guidance for overlapping interventions

	Adjustment required
Outreach	
Overlap less than 5%	Add all beneficiaries (no corrections)
Overlap more than 95%	Account for only the largest number (so no 'adding' at all)
Overlap between 5 and 95%	Estimate each overlap(s) and show calculation
Income/Jobs	
If attributable (isolated) impact per (cluster of) interventions	Add all beneficiaries
Pilot and upscale phase	
Upscale (phase 2) interventions probably overlap with pilot (phase 1) interventions if target beneficiaries are the same	
Outreach	Deduct 100% after completion of upscale intervention (achieved/projected)
Income/Jobs	'Freeze' impact of pilot intervention at the start of the 'upscale intervention'

6

ESTIMATING ATTRIBUTABLE CHANGE



6 ESTIMATING ATTRIBUTABLE CHANGE¹⁶

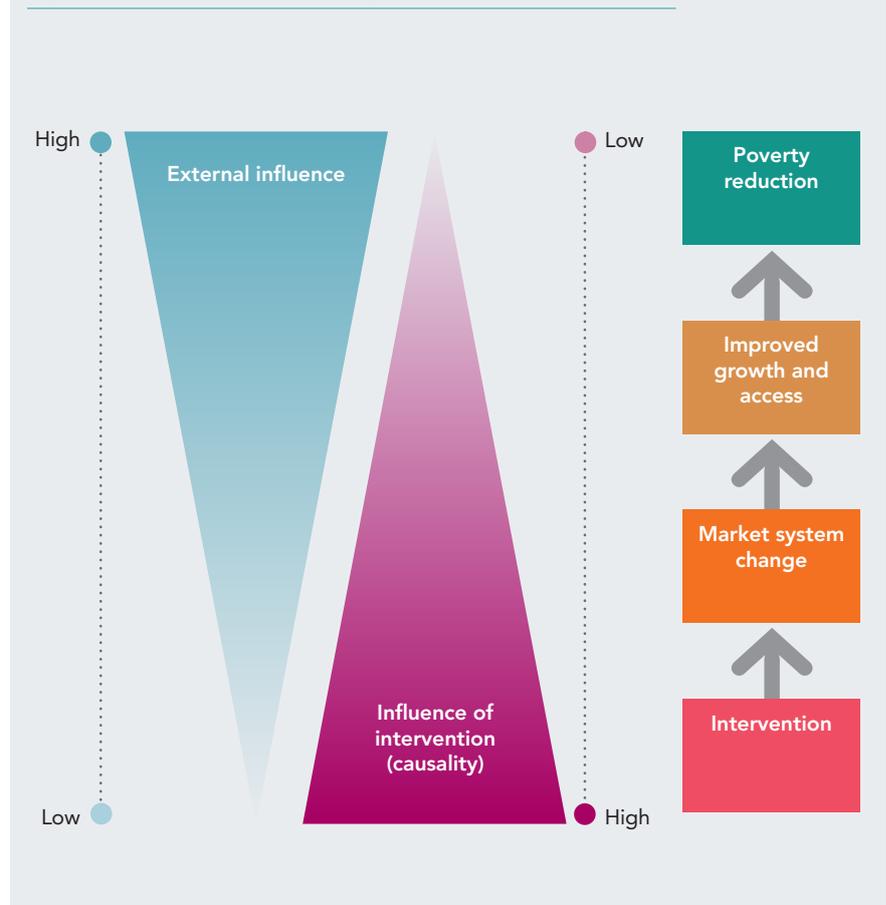
Attribution involves a causal claim about the intervention as the cause of the result, and measurement of how much of the result can be linked to the intervention. In the case of GEMS, interventions operate as part of a wider system where, in nearly all cases, they interact in some way with other publicly funded and private activities to achieve their intended results.

Most GEMS interventions can therefore be seen as a 'contributory' cause – i.e. the intervention is a vital part of a 'package' of causal factors that are together sufficient to produce the intended effect. However on its own, the intervention is neither sufficient, nor always necessary to achieve a desired result. This focuses attention to the role of the intervention in a package of causes.

GEMS interventions aim to catalyse change, inducing spill-over effects to indirectly scale up change. This means that external factors have an important influence on the scale and nature of change, which grows as we move further up the results chain (see Figure 5).

Given the multiple factors that can affect outcomes and impacts, results measurement needs to measure the *added value* of the intervention under consideration, separate from those other factors. Any observed changes will be, in general, only partly caused by the intervention of interest. Other factors will often interact and strengthen/reduce the effects of the intervention of interest. Therefore, addressing this 'attribution problem' implies both isolating and accurately measuring the particular contribution of an intervention and ensuring that causality runs from the intervention to the result.

Figure 5: Attribution – causality and external influence



16. The DCED provides useful guidance on addressing attribution. See <http://www.enterprise-development.org/download.aspx?id=2012>

Whilst rigorous proof of attribution will be beyond the means of almost all programmes, attribution should always be demonstrated to a level that would convince a reasonable but sceptical observer. GEMS should report on the other contributors to the change, as accurately as possible, assign a percentage to the level of attribution that can be claimed¹⁷. This should be estimated for each level in the results chain and reflected in the figures reported. The basis for the calculation of this percentage should be presented transparently.

This should be done according to the following stages of theory-based results measurement for each level in the results chain:¹⁸

1. Set out the attribution problem

to be addressed: Assess the nature and extent of the attribution challenge by asking:

- What do we know about the nature and extent of the contribution expected?
- What other public programmes and private actions will have contributed to the changes claimed?¹⁹
- What would show that GEMS has made an important contribution?²⁰
- What would indicate that GEMS has had the effects envisaged in the results chain for the intervention?
- How difficult is it to evidence these effects and why?

2. Assemble and assess the contribution narrative and challenges to it:

From the outset, it is important to validate whether the results chain and the assumptions that it depends on hold true. This validation process should be undertaken systematically and regularly in order to iteratively build up a convincing and plausible evidence-based narrative on the effects that GEMS is having in direct and/or indirect ways. It is desirable that this process involves relevant external stakeholders who are in a position to externally verify that the original results chain and future observed changes are plausible and credible.

3. Gather evidence to verify the contribution narrative:

The type of evidence gathered will largely depend on the nature of the intervention and the context. Further guidance on specific methods is provided in Section 5. Ideally the evidence base will consist of a combination of quantitative and qualitative data focused on testing and proving the results chain. Qualitative impact studies will complement quantitative studies, while case-studies, thematic studies and cost-benefit analysis will complement efforts to assess attribution.

4. Revise and strengthen the contribution narrative:

This is a continuous process of testing and revising the theory of change that underpins the central argument that GEMS is making a difference. In this way contribution analysis has a formative effect in that it allows programmes to quickly understand whether or not resources are being used in an optimal way to deliver the changes envisaged at the outset.

Based on this process, programmes should assign a percentage to the level of attribution that can be assigned to observed changes in indicators – for each level in the results chain. Programmes should try to balance accuracy and simplicity in doing this, and thereby provide estimates which are credible both within and outside the GEMS, and at the same time are manageable for staff to implement. It is important that significant effort is exerted in avoiding ‘self-importance bias’ in the assignment of a percentage to the level of attribution – applying the 3-Step process and a combination of quantitative and qualitative measurement techniques.

17. DCED (2010).

18. Much of this section is drawn from GEMS2 (2012).

19. Outcome harvesting is one of a range of techniques that may be helpful in identifying explanations of change.

20. Note that some programmes (for example improving the business environment) create pre-conditions for development outcomes, rather than stimulating actual change. Attribution (and measurement of impact) may be more difficult in such cases.

7

DATA SOURCES AND COLLECTION METHODOLOGIES



7 DATA SOURCES AND COLLECTION METHODOLOGIES

7.1. Data sources

A mixed method approach to results measurement implies the use of a combination of quantitative and qualitative data sources – both drawn from intervention-specific and sector/programme-wide surveys. The selection of data sources should be included in component-wide and intervention-specific measurement plans.

Wherever possible, impact and outcomes should be measured using **quantitative measurement** of the target population. In following the 3-Step approach to measurement, quantitative data will be required of:

- Changes at the intervention level and, ideally, a counterfactual comparison.
- Wider surveys of the target population (e.g. through the cross-GEMS Enterprise Survey).

In most cases, rigorous estimates of attribution will require **qualitative methods** as a complement to quantitative measurement. This will help to triangulate evidence of impact and test the plausibility of intervention pathways specified in the GEMS results chains. Qualitative approaches will also provide a mechanism for identifying unforeseen consequences. This is very important when impacts are dependent on complex pathways of change, including crowding-in and catalyst effects, since the definition of target indicators relies on assumptions about market sensitivity to small events. Qualitative approaches are also valuable in determining the reasons that particular types of impact were or were not realised.

Many GEMS interventions will go through an initial piloting stage. Rigorous measurement at this stage in the project will often be valuable for three reasons:

- A pilot will normally be more 'contained' than subsequent roll-out of the intervention, meaning that it will be easier and more cost effective to identify a comparison group and isolate attributable change.
- The data gathered at this stage in an intervention is valuable to assess its viability, learn lessons in regarding optimal intervention design, and to accordingly adjust the design of the intervention in any subsequent scaling up.
- Estimates of the scale of impact derived during a pilot stage may be used as proxies for estimating the scale of change at the scaling up stage – where it will be more challenging and costly to measure change and identify a comparison group. Where this is done, a methodology should be put in place to regularly validate the extrapolation when changes in indicators for large numbers of enterprises are calculated using data from small samples or a pilot phase.

7.2. Data collection strategy

GEMS components should develop a data collection strategy that answers the following questions:

- At what point in time should the impact be measured?
- What data are required?
- What is already being collected/available?
- What additional data need to be collected?
- Who will be responsible for data collection and what processes need to be set up?

The strategy should set out the design of the results measurement activities, including surveys, qualitative methods to be used, the timing of these activities, and other aspects of results measurement design. Indicators are required throughout the results chain, meaning that data collection requirements are likely to include:

- **Administrative data** on the delivery of the intervention. At a minimum, monitoring data are needed to know when a programme starts and who receives benefits, as well as to provide a measure of the 'intensity' of the intervention in cases when it may not be delivered to all beneficiaries with the same content, quality, or duration.²¹

- **Survey data:** GEMS components will require a combination of:
 - > **Bottom-up surveys**, which are intervention-specific to address the Step 1 evaluation questions. These will be tailored to each specific intervention and will generally focus on the direct beneficiaries of the intervention to assess the degree to which intended outputs (and outcomes) have been achieved.
 - > **Top-down surveys** which will cover the sector as a whole to address the Step 2 research questions. For most components, this will be undertaken through the cross-GEMS Enterprise Survey. For GEMS 2, a separate construction and real estate sector survey will be undertaken. Surveys should collect information on a sample of enterprises in an area where the project expects to work, as well as on a comparable sample in an area in which no project activity is planned. GEMS components should closely supervise data collection to ensure a good quality dataset. Following the baseline, since a set of panel data is desired, data collected from particular respondents during the different survey rounds must be consistent with each other.
- **Qualitative research:** This research can take the form of interviews, focus group discussions, and in-depth histories/case studies. A variety of methods may be appropriate, including outcome harvesting, most significant change and qualitative comparative analysis. Some qualitative research may be incorporated into the survey work. It is likely that this will be complemented by in-depth consultations undertaken by GEMS intervention managers.
- **Data on exogenous factors** that may affect the outcome of interest. These make it possible to control for outside influences.
- **Secondary data and other information**, including sector analysis and reports, household surveys, etc.

7.3. Survey guidance

Generic guidance on good practice in collecting baseline information and undertaking research is provided in Section 3 of DCED (2010). Research should be in line with established good practices for choice of data gathering tools, planning, questionnaire (or other instrument design), sampling, data gathering, supervision, data entry, analysis and research management. Ten criteria for a good survey are provided in Box 6.

GEMS faces significant challenges in ensuring that data collected through surveys or other means is 'representative'²². This is largely due to the following characteristics of the programme:

- The 'target population' is in many cases very large. For example, it is not possible to isolate the potential beneficiaries of GEMS 3 in any given state: it has the potential to deliver income and employment benefits to a wide cross-section of the population.
- In many cases, data inadequacies in Nigeria and a large and dominant informal sector mean that total population figures from which a robust sampling frame can be derived are not available.
- The degree of market-level change that can be facilitated by GEMS is likely to be relatively small relative to the wide range of explanatory variables that exist.
- High levels of attrition are likely in many cases, meaning that the sample size will be considerably larger than would otherwise be required.

Box 6: Ten criteria for a good survey

1. The target population is well defined
2. The sample matches the target population
3. The sample is randomly selected
4. The sample size is large enough
5. Good follow-up minimizes non-response
6. The type of survey is appropriate
7. The questions are well worded
8. The survey is properly timed
9. The survey personnel are well trained
10. The survey answers the original question

Source: DCED (2010)

This handbook does not set fixed guidelines for sample sizes, margins of error and confidence levels. GEMS must be transparent in the methods used for measurement and report the confidence levels and margins of error of the quantitative results reported. Given the need to ensure that the cost of measurement is proportionate, a mixed method approach that triangulates results will in most cases be appropriate, providing a convincing body of evidence, whilst acknowledging uncertainties in the accuracy of the reported results.

7.4. Measurement frequency

The GEMS logframe defines indicators on an annual basis during the period of implementation, plus a final indicator two years after implementation ends – to take account of time taken to achieve results from systemic change and to assess sustainability. It may not be cost effective to undertake a full results measurement process on an annual basis, although this is likely to vary depending on the characteristics of individual GEMS components and interventions. As a minimum, GEMS components should report on output indicators on an annual basis and on outcome and impact indicators at the baseline, mid- and end-point of the programme, and plan for an additional survey two years after the completion of the programme²³. Responsibility for completing the final survey still needs to be agreed.

22. Saying that survey data is 'representative' normally implies that it can be said with 95% certainty that the observations reported from a selected sample are the same as would be for the entire 'population'.

23. It may be possible to report preliminary estimates on impact and outcome level indicators on a more regular basis. However, it should be made clear where reported figures have not followed the 3-Step approach and may therefore not take account of deadweight loss and displacement.

ANNEXES



1 GEMS LOGFRAME

GEMS aggregated logframe (impact and outcome levels)

Impact: To increase growth, income and employment, especially for poor men and women, in target markets in selected states and nationally

Indicator 1: Income (outreach)	Baseline 2011	Milestone 1 2012	Milestone 2 2013	Milestone 3 2014	Target 2015	Target 2017
Number of people recording positive change in incomes	0	1,200	26,862	73,385	124,684	171,182
Notes: data to be disaggregated by formal/informal. Average total annual income increase to reach 15% or more						
Number of poor	0	420	12,464	33,625	56,324	78,590
Number of female	0	36	6,419	19,094	31,496	43,700
Source	Programme/intervention monitoring information; surveys of representative sample of target and control group firms and enterprises					
Indicator 2: Income (value)	Baseline 2011	Milestone 1 2012	Milestone 2 2013	Milestone 3 2014	Target 2015	Target 2017
Aggregated change in cumulative income (GBP)	0	£600,000	£11,036,610	£26,771,429	£45,267,402	£64,101,775
Notes: to be further disaggregated by formal/informal						
Poor	0	£210,000	£5,646,810	£13,286,599	£21,866,757	£32,000,747
Female	0	£ -	£1,269,277	£3,722,352	£6,087,054	£8,536,313
Source	Programme/intervention monitoring information; surveys of representative sample of target and control group firms and enterprises					
Indicator 3: Employment	Baseline 2011	Milestone 1 2012	Milestone 2 2013	Milestone 3 2014	Target 2015	Target 2017
Change in employment (FTE jobs)	0	0	2,795	14,434	24,080	29,776
Notes: to be further disaggregated by: jobs created/ people into employment; formal/informal.						
Number of females	0	0	1,533	4,468	7,297	10,259
Source	Programme/intervention monitoring information; surveys of representative sample of target and control group firms and enterprises					

Impact: To increase growth, income and employment, especially for poor men and women, in target markets in selected states and nationally

Indicator 4: Firm growth (outreach)	Baseline 2011	Milestone 1 2012	Milestone 2 2013	Milestone 3 2014	Target 2015	Target 2017
Number of firms (including self employed) with increased sales	0	1,000	11,133	25,859	45,523	62,727
Notes: disaggregated by: male/female managed or owned firms; formal/informal	Source Programme/intervention monitoring information; surveys of representative sample of target and control group firms and enterprises					
Indicator 5: Firm growth (value)	Baseline 2011	Milestone 1 2012	Milestone 2 2013	Milestone 3 2014	Target 2015	Target 2017
Increase in sales amongst targeted firms	£ -	£2,200,000	£111,500,000	£228,500,000	£356,500,000	£568,500,000
Notes: disaggregated by: male/female managed or owned firms; formal/informal. <i>Target currently excludes GEMS 3 – TBD</i>	Source Programme/intervention monitoring information; surveys of representative sample of target and control group firms and enterprises					
Indicator 6a: Systemic change and sustainability: private sector	Baseline 2011	Milestone 1 2012	Milestone 2 2013	Milestone 3 2014	Target 2015	Target 2017
Percentage of new or improved products and services, introduced through project facilitation, that are established in the market 12 months after project support has ended	0%	0%	28%	43%	55%	62%
	Source Note: Enterprise surveys, intervention specific evaluation reports					
Indicator 6b: Systemic change and sustainability: public sector and civil society	Baseline 2011	Milestone 1 2012	Milestone 2 2013	Milestone 3 2014	Target 2015	Target 2017
Percentage of new or improved regulations or reforms, introduced through project facilitation, that are established in the market 12 months after project support has ended	0%	0%	28%	43%	55%	62%
	Source Note: Enterprise surveys, intervention specific evaluation reports					
GEMS 3 only Additional outcome indicator D: Time and cost of Doing Business in Nigeria	Baseline 2011	Milestone 1 2012	Milestone 2 2013	Milestone 3 2014	Target 2015	Target 2017
Percentage improvement in Nigeria's absolute Doing Business rating	100	99	96	92	90	86
Notes: indexed by GEMS 3; baseline = 100	Source Doing Business dataset					
Indicator 7: Product quality	Baseline 2011	Milestone 1 2012	Milestone 2 2013	Milestone 3 2014	Target 2015	Target 2017
Improvements in product quality (variously defined by component)	Target non aggregatable - see separate component logframes for target details					
	Source Various annual consumer perception surveys					

2 GLOSSARY OF TERMS

Attribution	Attribution is defined by Glossary of Key Terms developed by the DAC Network on Development Evaluation as the ascription of a causal link between observed (or expected to be observed) changes and a specific intervention. ²⁴ In simple terms this means that attribution refers to extent of change that can be claimed by a project/intervention out of the total change that takes place.
Counterfactual	What would have happened if the intervention had not taken place.
Crowding in²⁵	Enterprises at levels other than the target level copying behaviours that those affected by programme activities have adopted; or entering a sector or value chain as a result of improved incentives and environment created (at least partly) by the programme. This term also applies to government agencies or civil society organizations, who are not directly involved in the programme, copying behaviours of those who are directly involved in the programme, or who change their behaviour as a result of improved incentives or environment created (at least partly) by the programme.
Deadweight loss	The proportion of total results that would have been secured anyway in the absence of the intervention.
Displacement	Some enterprises may be negatively affected because others are benefiting from programme activities. Displacement is the amount of negative effect on those enterprises harmed by programme activities. ²⁶
Full time equivalent	The ratio of the total number of hours worked to what would be undertaken by a full time worker. A full time worker is defined as someone who works for 8 hours per day, 240 days per year.
Informal employment	Includes <i>both</i> what is defined by the International Conference of Labour Statisticians (ICLS) as 'employment in the informal sector' <i>and</i> 'informal sector employment'. Detailed definitions are available at http://ilo.org/public/english/bureau/stat/download/papers/def.pdf
Intervention	An activity or series of activities designed to achieve a specific change in the support functions/ market or a set of activities designed to achieve the sustainable delivery of a new or improved service or output that, through its use by the target group, will result in improved business environment and contribute to increased incomes for that target group.
Most significant change	Most significant change is a form of participatory M&E that involves project stakeholders both in deciding the sorts of changes to be recorded and in analysing the data collected. The process involves the collection of significant change stories emanating from the field level, and the systematic selection of the most significant of these stories by panels of designated stakeholders or staff.
Multiplier	Further economic activity (e.g. jobs, expenditure or income) associated with additional income to those employed as a result of the intervention (income multipliers), with local supplier purchases (supplier multipliers) and with longer term development effects (dynamic effects e.g. induced inward migration).
Sustainable intervention	An intervention that remains established in the market 12 months after project support has ended.
Systemic change	Changes in market systems and the structures, such as government and civil society, that support markets that cause sustainable shifts in the way those market systems and structures operate, for example, changes in relationships within and among both private enterprises and public agencies, in incentives and in market support structures. Systemic change causes widespread indirect results such as crowding in, copying, enterprises shifting sectors and changes in enterprise start-up and exit rates. ²⁷

24. <http://www.oecd.org/dac/2754804.pdf>

25. Source: DCED.

26. Ibid.

27. Ibid.

3 REFERENCES AND FURTHER READING

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4 NIGERIA HOUSEHOLD COMPOSITION BY ZONE (2011)

Nigeria household composition by zone (2011)

	Zone						Nigeria
	NC	NE	NW	SE	SS	SW	
Household composition by age group (%)							
Less than 15	43.6	50.3	51.7	34.3	39.2	35	43.2
15 to 64	52.8	46.4	45.3	56.2	56.4	58.5	52
65 and older	3.7	3.4	3	9.5	4.4	6.5	4.8
Average household size	6.04	7.42	6.75	4.57	5.44	4.4	5.63
Net income per household required to keep household above poverty line (₦)	497,720	611,438	556,227	376,586	448,278	362,578	463,935
Net income per worker required to keep household above poverty line (₦)	156,068	177,595	181,907	146,626	146,106	140,862	158,469

Source: Derived from General Household Survey (GHS) conducted in 2010/2011 by the National Bureau of Statistics.²⁸

28. The GHS was a detailed survey administered to approximately 5,000 households comprising 28,000 individuals. It is representative at the national, sectoral (urban/rural), and zonal levels.

5 INTERVENTION-SPECIFIC GUIDANCE

The DCED Standard requires that results chains are developed for every intervention to show how the intervention will lead to the achievement of development goals and to mention other relevant contributions. This has been done by all GEMS components.

To provide guidance on the application of the measurement approach described in the main body of this handbook, this section presents results chains for five common categories of GEMS intervention and provides suggested data sources and measurement methods for each. The examples provided are illustrative and, as a result, are generic and simplistic. They are not representative of every GEMS intervention and will need to be adapted to reflect specific contexts.

The five categories are:

- Support to BMOs and related advocacy and industry coordination.
- Skills development and capacity building.
- Establishment of new or improved products, services or processes.
- Business enabling environment reform.
- Business support services.

Based on information provided by the four GEMS components, all existing or planned interventions have been listed and categorised according to the five categories listed above (see Annex 6). As is inevitable in a process of developing generic categories for a large set of disparate interventions, some fit more neatly into these categories than others.

Support to BMOs and related advocacy and industry coordination

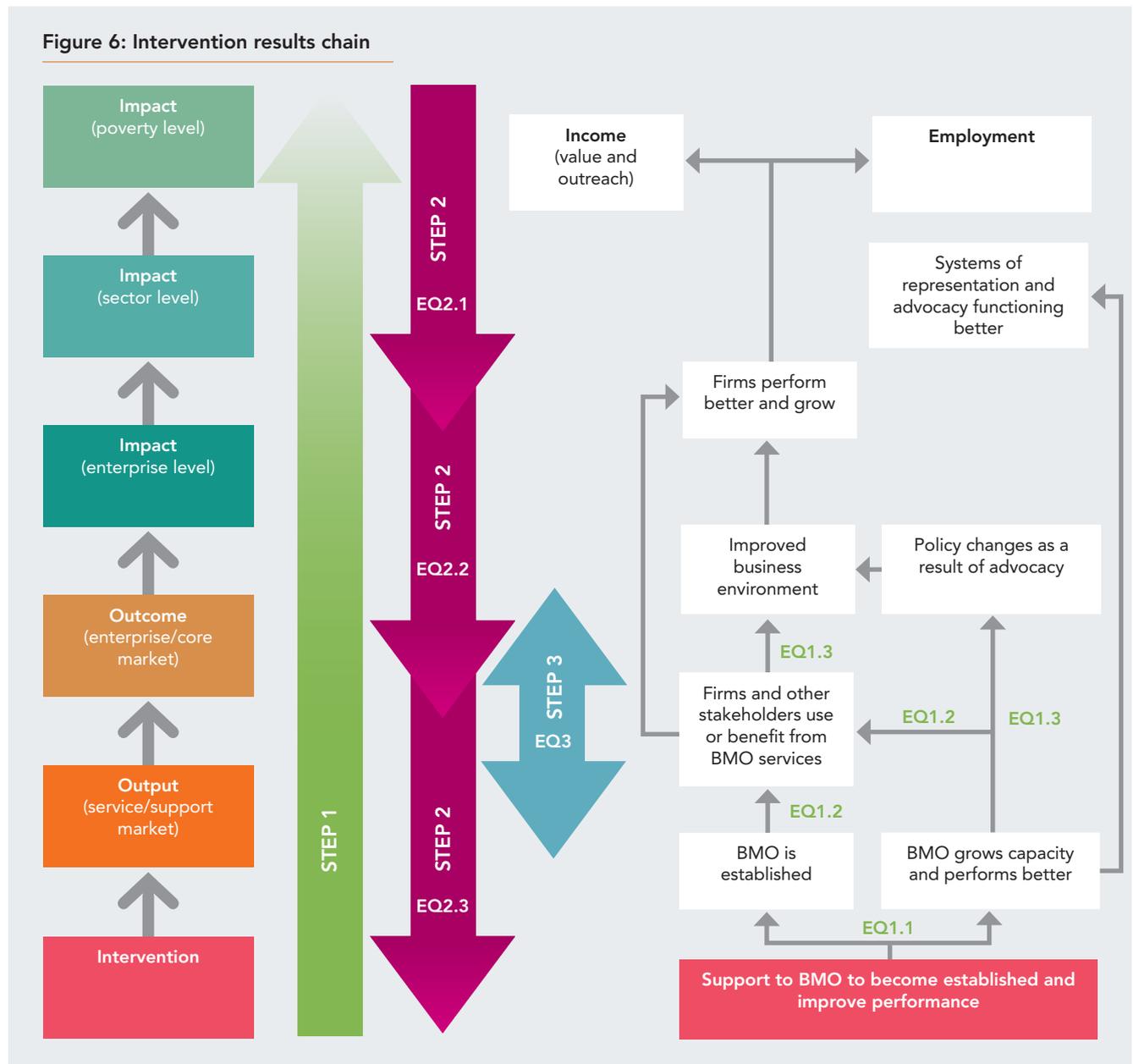


Table 7: Summary of suggested data sources and measurement methods – support to BMOs and related advocacy and industry coordination

	Data sources	Measurement methods
Step 1: Intervention to market system change (support and core markets)	<ul style="list-style-type: none"> Monitoring data. Key informant interviews and focus group discussions. Survey of users of BMO services. 	<ul style="list-style-type: none"> Institutional capacity assessments. Political economy analysis. Qualitative analysis and triangulation. Quantitative analysis of survey results.
Step 2: Changes in income and employment in core market	<ul style="list-style-type: none"> Household survey and HNLSS. National accounts. GEMS Enterprise Survey. Relevant reports. Key informant interviews and focus group discussions. 	<ul style="list-style-type: none"> Analysis of relevant data and documentation. Regression or difference-in-difference analysis. Qualitative analysis and triangulation.
Step 3: Compare and triangulate findings – linking core market change to GEMS	<ul style="list-style-type: none"> Findings from Steps 1 and 2. 	<ul style="list-style-type: none"> Synthesis and triangulation. Qualitative methods, including Perception Surveys, Most Significant Change analysis.

Table 8: Measurement design and methods selection framework – support to BMOs and related advocacy and industry coordination

Research question	Judgement criteria	Suggested indicators	Contextual factors to consider in measurement	Implications for measurement design and methods
Step 1: Intervention to market system change (support and core markets)				
EQ1.1 What have been the direct outputs from GEMS interventions?	<ul style="list-style-type: none"> To what extent have GEMS interventions led to: <ul style="list-style-type: none"> > The establishment of the BMO. > Improved BMO capacity and strengthened performance. 	<ul style="list-style-type: none"> Existence of BMO. Organizational capacity assessment of BMO. Member perceptions of BMO performance. Completion of business plans. 	<ul style="list-style-type: none"> What other factors are driving the establishment of the BMO and/or its improved capacity? Is there a baseline capturing initial levels of capacity in the BMO? 	<ul style="list-style-type: none"> Monitoring data. Key informant interviews and focus group discussions with BMOs receiving support. 'Before and after' institutional capacity assessments of BMO.
EQ1.2 What changes have occurred at the service/support market level?	<ul style="list-style-type: none"> To what extent have firms and other stakeholders increased the use of BMO services and benefited from this use? 	<ul style="list-style-type: none"> BMO membership numbers. Number of private public dialogues held. 	<ul style="list-style-type: none"> Is there a baseline for indicators? 	<ul style="list-style-type: none"> 'Before and after' survey of users of BMOs (i.e. members and companies using their services). BMO administrative data.
To what extent can these changes be attributed to GEMS?	<ul style="list-style-type: none"> To that extent has GEMS enabled firms to benefit from BMO services? 	<ul style="list-style-type: none"> Firm level capacity and performance. Firm growth (value). 	<ul style="list-style-type: none"> Can we define the pathways through which GEMS support will lead to benefits from BMO services? Are the BMOs pre-selected or self-selecting? Is it possible to define a comparison group of firms with matching characteristics which do not use BMO services? What are the key matching variables or criteria to define appropriate comparators? Is there likely to be spill over and contamination between the treatment and comparison group? 	<ul style="list-style-type: none"> Key informant interviews and focus group discussions with firms using BMO services. Survey of users of BMOs (i.e. members and companies using their services) – both for treatment and comparison groups.
What have been the other causal factors?	<ul style="list-style-type: none"> What other factors have led to: <ul style="list-style-type: none"> > The establishment of the BMO. > Improved BMO capacity and strengthened performance. > The use of BMO services by firms and other stakeholders. 		<ul style="list-style-type: none"> To what extent are there other 'contributory causes' to the achievement of the results? To what extent are there likely to be multiple benefits or 'unintended consequences'? How significant is the intervention, in terms of the identifiable change it represents? 	<ul style="list-style-type: none"> Key informant interviews and focus group discussions with firms using BMO services. Survey of users of BMOs (i.e. members and companies using their services) – both for treatment and comparison groups.

Table 8: Measurement design and methods selection framework – support to BMOs and related advocacy and industry coordination

Research question	Judgement criteria	Suggested indicators	Contextual factors to consider in measurement	Implications for measurement design and methods
EQ1.3 To what extent have the service/support level market changes led to an improvement in the performance and inclusiveness of the core market system?	<ul style="list-style-type: none"> To what extent have BMO activities had an effect on: <ul style="list-style-type: none"> > Policy changes as a result of advocacy. > Improvements in the business environment. What have been the other contributory factors? Can we observe any systemic changes in the market system for advocacy beyond the immediate results from the GEMS intervention? 	<ul style="list-style-type: none"> Number of policy changes as a result of advocacy. Business environment indicators. Number of BMOs replicating beneficiary BMO. 	<ul style="list-style-type: none"> Political economy analysis required to understand drivers of policy reform and the effectiveness of advocacy. 	<ul style="list-style-type: none"> Key informant interviews and focus group discussions with: firms using BMO services; BMOs; policy makers. Political economy analysis.
Step 2: Changes in income and employment in core market				
EQ2.1 How have the level and composition of income and employment changed (in the relevant sector/geographic area)?	<ul style="list-style-type: none"> Income and employment should, if possible, be measured at the household and enterprise level. 	<ul style="list-style-type: none"> Average incomes. Employment levels and wages. 	<ul style="list-style-type: none"> Do results include data on other characteristics of the population – to enable matching etc? 	<ul style="list-style-type: none"> General Household Survey and HNLSS (although infrequent). National accounts. GEMS Enterprise Survey.
EQ2.2 What market-level factors have led to the changes in income and employment?	<ul style="list-style-type: none"> What have been the key determinants of: <ul style="list-style-type: none"> > Improved firm performance and growth. > Growth in incomes and employment. > To what extent have improvements in policies and the business environment been a contributory factor? 	<ul style="list-style-type: none"> Sources of income and employment. Firm growth (value). Systemic change and sustainability. Key determinants of changes to firm performance. 	<ul style="list-style-type: none"> What sample size is required for it to be representative at a national and/or state level? To what extent are secondary data sources available, timely and reliable? 	<ul style="list-style-type: none"> GEMS Enterprise Survey to establish improved growth and firm performance. Regression or difference-in-difference analysis of determinants of sector growth. Comparative analysis with other states where GEMS did not provide support. Key informant interviews and focus group discussions to establish causes of improved firm performance and importance of policies and business environment. Analysis of relevant data and documents.

Table 8: Measurement design and methods selection framework – support to BMOs and related advocacy and industry coordination

Research question	Judgement criteria	Suggested indicators	Contextual factors to consider in measurement	Implications for measurement design and methods
EQ2.3 What have been the causes of any changes in market conditions?	<ul style="list-style-type: none"> • What have been the causes of the changes identified in EQ2.2? • To what extent have BMOs had an influence on the determinants of improved firm performance and growth in incomes and employment? 			<ul style="list-style-type: none"> • GEMS Enterprise Survey. • Doing Business Survey. • Key informant interviews and focus group discussions to establish causes of improved firm performance and importance of policies and business environment. • Analysis of relevant data and documents.
Step 3: Compare and triangulate findings – linking core market change to GEMS				
EQ3.1 To what extent can the market level changes observed in Step 2 be attributed to GEMS interventions?	<ul style="list-style-type: none"> • To what extent have the causes of improved firm performance and income and employment growth been affected by the outputs of GEMS support to BMOs? 		<ul style="list-style-type: none"> • Time lag between changes in BMO performance feeding into improved firm performance and growth in income and employment. • Significance of GEMS interventions in the wider context of business representation and advocacy in the sector. • Ensure that deadweight loss and displacement are taken into account in triangulation exercise. 	<ul style="list-style-type: none"> • Synthesis and triangulation of analysis from Steps 1 and 2. • Qualitative methods, including Perception Surveys and Most Significant Change analysis.

Skills development and capacity building

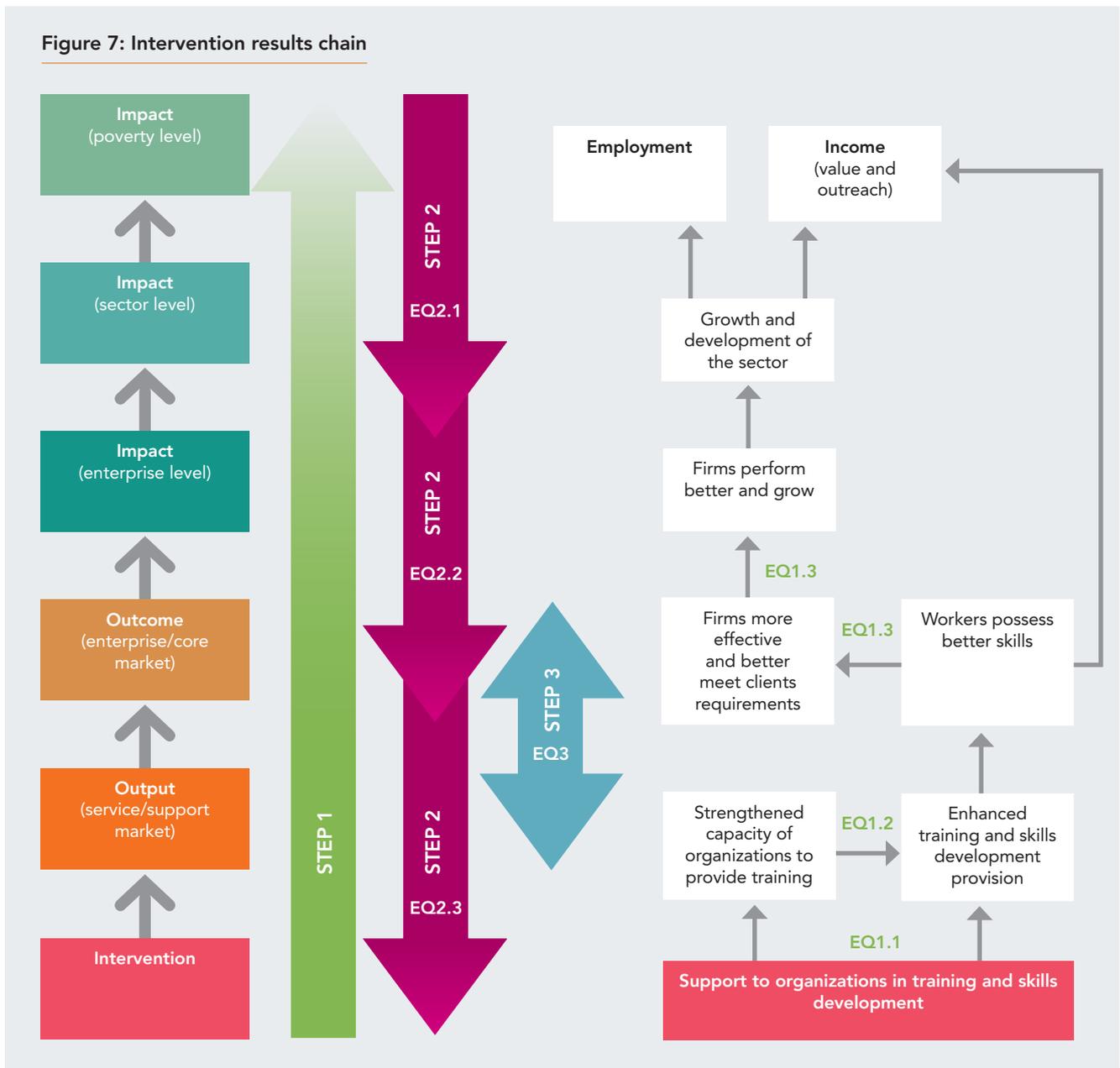


Table 9: Summary of suggested data sources and measurement methods – skills development and capacity building

	Data sources	Measurement methods
Step 1: Intervention to market system change (support and core markets)	<ul style="list-style-type: none"> Monitoring data. Survey of direct beneficiaries (training institutions and firms). Interviews, consultations, focus group discussions. GEMS Enterprise Survey. 	<ul style="list-style-type: none"> Market analysis. Cohort tracking study. Qualitative analysis and triangulation. Quantitative analysis of survey data.
Step 2: Changes in income and employment in core market	<ul style="list-style-type: none"> Household survey and HNLSS. National accounts. GEMS Enterprise Survey. Relevant reports. Key informant interviews and focus group discussions. 	<ul style="list-style-type: none"> Analysis of relevant data and documentation. Regression or difference-in-difference analysis. Qualitative analysis and triangulation.
Step 3: Compare and triangulate findings – linking core market change to GEMS	<ul style="list-style-type: none"> Findings from Steps 1 and 2. 	<ul style="list-style-type: none"> Synthesis and triangulation.

Table 10: Measurement design and methods selection framework – skills development and capacity building

Research question	Judgement criteria	Suggested indicators	Contextual factors to consider in measurement	Implications for measurement design and methods
Step 1: Intervention to market system change (support and core markets)				
<p>EQ1.1 What have been the direct outputs from GEMS interventions?</p> <p><i>Examples of outputs</i>²⁹</p> <ul style="list-style-type: none"> • Co-operation agreements between key market players for provision of off the job skills training • Capacity of key market players increased to provide off the job training • Strengthening of capacity of vocational training institutions to provide training (trainers of trainers, new training programmes etc • Vocational training institutions are delivering training • Strengthened capacity on part of firms (formal and micro level) to provide on the job training. 	<ul style="list-style-type: none"> • To what extent have GEMS interventions led to: <ul style="list-style-type: none"> > Strengthened capacity by vocational training institutes to deliver training. > Better capacity of firms (formal and micro) to provide training. 	<ul style="list-style-type: none"> • Number of people trained. • Satisfaction of trainees. • Results from training courses (where applicable). 	<ul style="list-style-type: none"> • Are the direct beneficiaries identifiable and known – e.g. vocational training institutes, firms providing training (both formal construction firms and micro level firms). • Is there a baseline capturing initial levels of capacity and provision of training to this sector and by whom? • Does the rationale for GEMS in the intervention design provide the basis for intervention in the identified areas of intervention – based on skills gaps, growth areas in the sector etc. • Is it possible to define appropriate comparators in the training/ skills market amongst the key market players³⁰ that have not been supported by GEMS. What are the key matching variables or criteria to define appropriate comparators? 	<ul style="list-style-type: none"> • Review of monitoring data specifying numbers of direct beneficiaries (training providers and firms) of the programme • Survey of direct beneficiaries (training institutions/firms) to measure changes in supply side provision (quality and quantity) in that particular sector, before and after GEMS. • Counterfactual – survey of market players not supported by GEMS to examine their training provision and how has it been changing over the period covered by GEMS. This should aim to isolate differences between what market players not supported by GEMS are doing versus what market players supported by GEMS are delivering. It should also help establish market (training market) effects on them as a result of GEMS intervention. • Interviews, consultations, focus group discussions with the training infrastructure (e.g. providers and firms) and final beneficiaries of training support (individuals and firms) to explore how and in what way GEMS is influencing the skills/training provision for the supported sectors.

29. Source: results frameworks for GEMS 2 – revised April 2012.

30. BMOs, training organizations, other institutions and individual trainers are defined as the key market players.

Table 10: Measurement design and methods selection framework – skills development and capacity building

Research question	Judgement criteria	Suggested indicators	Contextual factors to consider in measurement	Implications for measurement design and methods
EQ1.2 What changes have occurred at the service/support market level?	<ul style="list-style-type: none"> To what extent has there been an overall improvement in training provision? Are the changes to the training/ skills market system wide? Has improved training provision led to an increase in skills in the workforce? 	<ul style="list-style-type: none"> Number of training courses in existence. 	<ul style="list-style-type: none"> How is the market structured – are there different segments, different organisations active in those segments? 	<ul style="list-style-type: none"> Interviews and consultations with key market players to appreciate market changes and factors driving change. Overall market analysis of the training /skills provision for the sector (supply and demand sides).
To what extent can these changes be attributed to GEMS?	<ul style="list-style-type: none"> What changes have been made to training programmes as a result to GEMS? How has the quality and quantity of the supply of skilled trainers to the sector been affected by GEMS? 		<ul style="list-style-type: none"> Can we define the treatment and the change pathways through which results are expected to be attained? Are there differential effects on different market segments – can we break up the market into segments that are more affected by GEMS and those less affected? Can we compare the quality of provision on offer by firms and training providers as a result of GEMS versus the quality of training provision by those firms/ training providers not supported by GEMS – Is it possible to construct a comparison group? Construction of a comparison group may be compromised by possible spillovers and contamination of comparators. Non GEMS providers may respond to market competition by offering new/better courses similar to those provided by those supported by GEMS providers. 	<ul style="list-style-type: none"> Monitoring data on direct beneficiaries (firms, training providers) capturing the numbers of new trainers, changes in their capacity levels, numbers of new/ enhanced courses designed/on offer, additional qualifications on offer, etc. Survey of direct beneficiaries and a comparison group to examine changes in quality and quantity in training provision. Analysis of the market for training provision to sector. Feedback from end beneficiaries (individuals and their employers) on the quality of training provision – cohort tracking study of final beneficiaries/end users taking a representative sample of individuals trained and interviewing them as well as their employers to establish how skills provision has changed and how it is feeding into business performance changes. Interviews and consultations with key market players.

Table 10: Measurement design and methods selection framework – skills development and capacity building

Research question	Judgement criteria	Suggested indicators	Contextual factors to consider in measurement	Implications for measurement design and methods
What have been the other causal factors?	<ul style="list-style-type: none"> What have been the wider changes in the training/skills development market for that sector . 		<ul style="list-style-type: none"> To what extent are there other contributory causes leading to the achievement of the results To what extent are there likely to be multiple benefits/unintended consequences How significant is the GEMS intervention in terms of the identifiable change it represents. 	<ul style="list-style-type: none"> Trend analysis of demand by sector for skilled workers and unemployment levels Overall market analysis of the training/skills provision for the sector (supply and demand sides) Interviews and consultations with key market players
EQ1.3 To what extent have the service/support level market changes led to an improvement in the performance and inclusiveness of the core market system?	<ul style="list-style-type: none"> To what extent has improved training and skills provision in the sector fed into improved business performance? 	<ul style="list-style-type: none"> Performance of firms providing training or where trained workers are employed. 	<ul style="list-style-type: none"> Are the end users or final beneficiaries known or identifiable e.g. the individuals trained as a result of GEMS intervention? Also are their employers identifiable? Is it possible to break down the changes in the performance of the core market as a result of training targeted at different groups e.g. youth, apprentices, unemployed, employed apprentices, artisans etc. What is the appropriate time lag between skills improvements and improvements in business performance? How does this vary between firms in the sector? 	<ul style="list-style-type: none"> Feedback from end beneficiaries (individuals and their employers) on the quality of training provision – cohort tracking study taking a representative sample of individuals trained and interviewing them as well as their employers to establish how skills provision has changed and how it is feeding into business performance changes and plans by their employers to hire more workers. Feedback from a comparison group – not benefitting from GEMS (individuals and enterprises) – what have been the changes to their business performance? Are there any spillovers from GEMS impacting on their performance.
Step 2: Changes in income and employment in core market				
EQ2.1 How have the level and composition of income and employment changed (in the relevant sector/ geographic area)?	<ul style="list-style-type: none"> What changes in income and employment can we identify in the sector/geographic region in which skills interventions have been focused? 	<ul style="list-style-type: none"> Average incomes. Employment levels and wages. 	<ul style="list-style-type: none"> Is it possible to obtain reliable and up to date information from secondary sources, with the requisite levels of disaggregation? Can we identify a comparison group? 	<ul style="list-style-type: none"> General Household survey and HNLSS provide estimates of income and employment. But infrequent. Alternative data sources likely to be required, including GEMS Enterprise Survey. Labour market data/surveys capturing trends in incomes and employment levels in sector

Table 10: Measurement design and methods selection framework – skills development and capacity building

Research question	Judgement criteria	Suggested indicators	Contextual factors to consider in measurement	Implications for measurement design and methods
EQ2.2 What market-level factors have led to the changes in income and employment?	<ul style="list-style-type: none"> • What have been the key determinants of: • Improved firm performance and growth. • Growth in incomes and employment. • What is the strength of the relationship between income levels and skills in the sector? 	<ul style="list-style-type: none"> • Source of incomes and employment. • Firm growth (value). • Systemic change and sustainability. • Key determinants of changes to firm performance. • Performance of skilled workers and firms employing trainees. 	<ul style="list-style-type: none"> • Time lag between changes in training provision feeding into improved firm performance and growth in income and employment • Significance of GEMS interventions in the wider context of the sector and access to skilled workers by the sector • A multitude of other factors affecting improvements in firm performance other than skills related issues • Is it possible to break the sector into segments based on expectations that some parts are more and others less affected by skills / training type interventions? 	<ul style="list-style-type: none"> • Regression analysis of the determinants of changes in income and employment, which includes skills as a dependent variable.
EQ2.3 What have been the causes of any changes in market conditions?	<ul style="list-style-type: none"> • What have been the causes of the changes identified in EQ2.2? • What have been the causes of identified improvements in workforce skills? 		<ul style="list-style-type: none"> • What are the sector level drivers of growth and performance? • Is GEMS targeted at the key drivers of growth and performance through its interventions – e.g. appropriately targeted at skills gaps, areas with growth potential. 	<ul style="list-style-type: none"> • GEMS Enterprise survey. • Market analysis of training provision (demand and supply). • Interviews and consultations with firms to establish plausible attribution of GEMS to trends in firm performance, income and employment.

Step 3: Compare and triangulate findings – linking core market change to GEMS

EQ3.1 To what extent can the market level changes observed in Step 2 be attributed to GEMS interventions?	<ul style="list-style-type: none"> • To what extent have the causes of improved firm performance and income and employment growth been affected by the outputs of GEMS support in terms of skills development and training? 		<ul style="list-style-type: none"> • Taking the impact of GEMS on the training market and the data on the changes in business performance, can we distil with some degree of confidence what elements of the changes in the latter are due to GEMS. Can we quantify the changes in income and employment of poor people due to GEMS? • Ensure that deadweight loss and displacement are taken into account in triangulation exercise. 	<ul style="list-style-type: none"> • Triangulation of the findings from Steps 1 and 2 to build the evidence that the changes on the training / skills market due to GEMS have: <ul style="list-style-type: none"> > <i>plausibly</i> resulted in changes in business performance in the core market which in turn have > <i>plausibly</i> resulted in quantifiable changes in levels of employment and income for poor people. • Qualitative methods, including Perception Surveys and Most Significant Change analysis.
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Establishment of new or improved products, services or processes

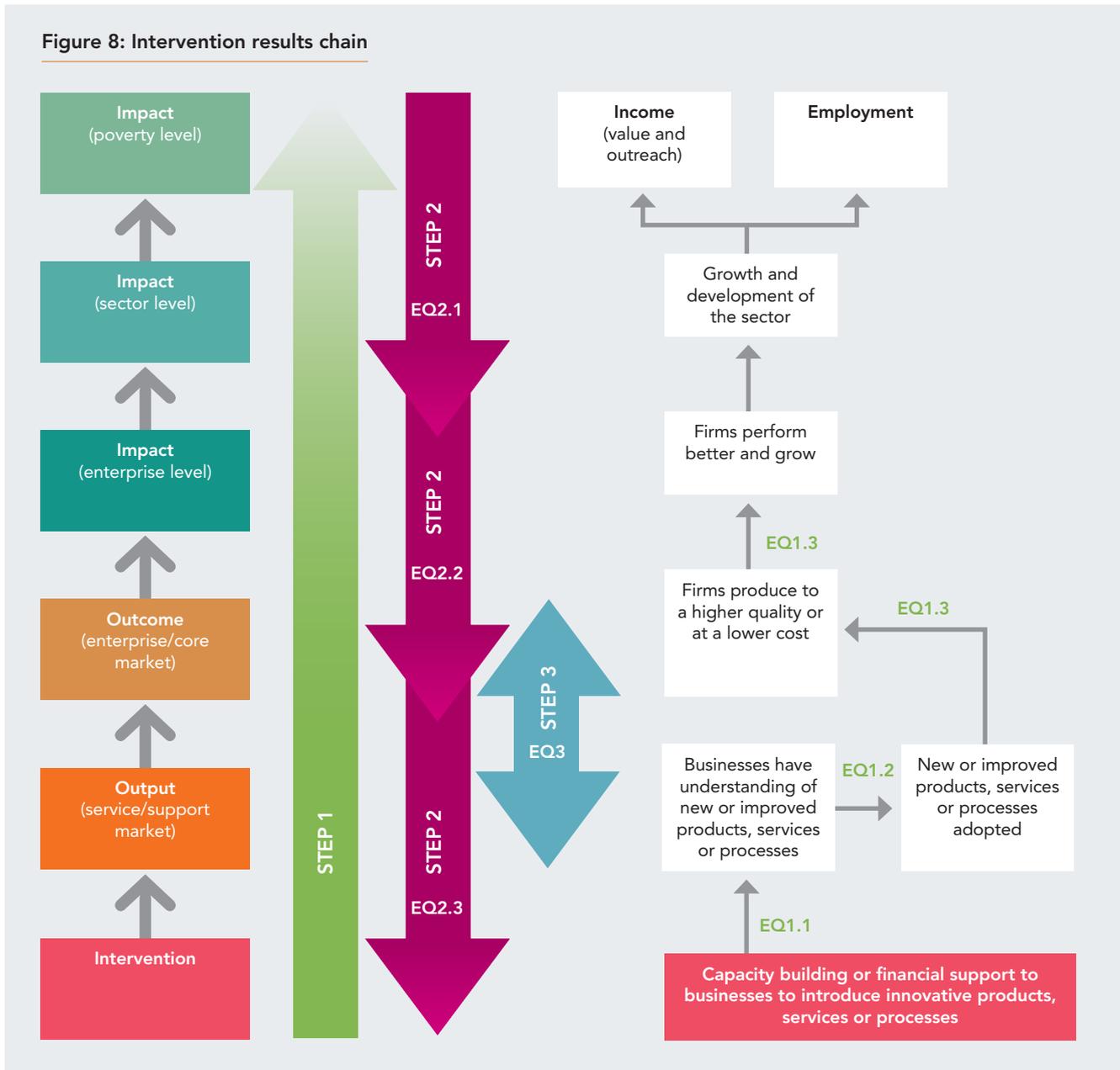


Table 11: Summary of suggested data sources and measurement methods – establishment of new or improved products, services or processes

	Data sources	Measurement methods
Step 1: Intervention to market system change (support and core markets)	<ul style="list-style-type: none"> Monitoring data. Key informant interviews. Enterprise surveys. 	<ul style="list-style-type: none"> Market analysis. 'Before and after' studies. Comparisons with non-adopters of new innovation.
Step 2: Changes in income and employment in core market	<ul style="list-style-type: none"> Household survey and HNLSS. National accounts Cross-GEMS Enterprise Survey. Key informant interviews and focus group discussions. 	<ul style="list-style-type: none"> Analysis of relevant data and documentation. Regression or difference-in-difference analysis. Outcome harvesting. Qualitative comparative analysis.
Step 3: Compare and triangulate findings – linking core market change to GEMS	<ul style="list-style-type: none"> Findings from Steps 1 and 2. 	<ul style="list-style-type: none"> Synthesis and triangulation. Qualitative methods, including Perception Surveys and Most Significant Change analysis.

Table 12: Measurement design and methods selection framework – establishment of new or improved products, services or processes

Research question	Judgement criteria	Suggested indicators	Contextual factors to consider in measurement	Implications for measurement design and methods
Step 1: Intervention to market system change (support and core markets)				
EQ1.1 What have been the direct outputs from GEMS interventions?	<ul style="list-style-type: none"> To what extent have GEMS interventions led to an improved understanding of new/innovative business models or production techniques? 	<ul style="list-style-type: none"> Level of awareness of innovation. 	<ul style="list-style-type: none"> Require market information on existing products and services (baseline). 	<ul style="list-style-type: none"> Monitoring data. Key informant interviews.
EQ1.2 What changes have occurred at the service/support market level?	<ul style="list-style-type: none"> To what extent has there been an adoption of an improved product, service or process. 	<ul style="list-style-type: none"> Number of firms adopting improved the product, service or process. Sales incorporating the improved product, service or process. 	<ul style="list-style-type: none"> Is it possible to identify comparable firms that are not applying the improved product, service or process? 	<ul style="list-style-type: none"> Try to identify similar firms as a 'comparison group'. Sales and number of enterprises involved.
To what extent can these changes be attributed to GEMS?	<ul style="list-style-type: none"> To what extent has GEMS been responsible for the improved product, service or process. 		<ul style="list-style-type: none"> Pathway leading innovation to anticipated benefits must be clear. 	<ul style="list-style-type: none"> Do target group perceive linkage between intervention and intended benefit?
What have been the other causal factors?	<ul style="list-style-type: none"> What other factors have led to the adoption of the improved product, service or process. 		<ul style="list-style-type: none"> What else/who else is promoting innovations? What other market signals are influencing the decision to adopt an innovation? What other conditions need to be in place for the innovation to be successful? 	<ul style="list-style-type: none"> 'Before and after' studies. Market analysis.
EQ1.3 To what extent have the service/support level market changes led to an improvement in the performance and inclusiveness of the core market system?	<ul style="list-style-type: none"> To what extent has the improved product, service or process led to improved quality or lower costs? To what extent has this enhanced firm performance and growth? 	<ul style="list-style-type: none"> Product quality. Production costs. Firm sales and profitability. 	<ul style="list-style-type: none"> What are the other influences of quality, cost, and enterprise performance? Is the market growing or shrinking? What factors affect the speed of adoption? 	<ul style="list-style-type: none"> Comparison of firm performance with firms not adopting new product, service or process.
Step 2: Changes in income and employment in core market				
EQ2.1 How have the level and composition of income and employment changed (in the relevant sector/geographic area)?	<ul style="list-style-type: none"> Income and employment should, if possible, be measured at the household and enterprise level. 	<ul style="list-style-type: none"> Average incomes. Employment levels and wages. 	<ul style="list-style-type: none"> Is it possible to obtain reliable and up to date information from secondary sources, with the requisite levels of disaggregation? Can we identify a comparison group? 	<ul style="list-style-type: none"> General Household Survey and HNLSS (although infrequent). National accounts. GEMS Enterprise Survey.

Table 12: Measurement design and methods selection framework – establishment of new or improved products, services or processes

Research question	Judgement criteria	Suggested indicators	Contextual factors to consider in measurement	Implications for measurement design and methods
EQ2.2 What market-level factors have led to the changes in income and employment?	<ul style="list-style-type: none"> • What have been the key determinants of: • Improved firm performance and growth. • Growth in incomes and employment. • To what extent has adoption of new product, service or process been a contributory factor? 	<ul style="list-style-type: none"> • Source of incomes and employment. • Firm growth (value). • Systemic change and sustainability. • Key determinants of changes to firm performance. • Performance of firms applying new product, service or process. 	<ul style="list-style-type: none"> • What sample size is required for it to be representative at a national and/or state level? • To what extent are secondary data sources available, timely and reliable? 	<ul style="list-style-type: none"> • GEMS Enterprise Survey to establish improved growth and firm performance. • Regression or difference-in-difference analysis of determinants of sector growth. • Key informant interviews and focus group discussions to establish causes of improved firm performance and importance of new product, service or process. • Analysis of relevant data and documents.
EQ2.3 What have been the causes of any changes in market conditions?	<ul style="list-style-type: none"> • What have been the causes of the changes identified in EQ2.2? To what extent have GEMS interventions had an influence? 		<ul style="list-style-type: none"> • What are the sector level drivers of growth and performance? • Is the sector growing? 	<ul style="list-style-type: none"> • GEMS Enterprise Survey. • Doing Business Survey. • Analysis of relevant data and documents.
Step 3: Compare and triangulate findings – linking core market change to GEMS				
EQ3.1 To what extent can the market level changes observed in Step 2 be attributed to GEMS interventions?	<ul style="list-style-type: none"> • To what extent have the causes of improved firm performance and income and employment growth been affected by the outputs of GEMS support to business models or production techniques? 		<ul style="list-style-type: none"> • Can we distil with some degree of confidence what elements of the changes in business performance are due to GEMS support to improved products, services or processes? Can we quantify the changes in income and employment of poor people due to GEMS? • Ensure that deadweight loss and displacement are taken into account in triangulation exercise. 	<ul style="list-style-type: none"> • Triangulation of the findings from Steps 1 and 2 to build the evidence that the improved products, services or processes due to GEMS have: <ul style="list-style-type: none"> > <i>plausibly</i> resulted in changes in business performance in the core market which in turn have > <i>plausibly</i> resulted in quantifiable changes in levels of employment and income for poor people. • Qualitative methods, including Perception Surveys and Most Significant Change analysis.

Business enabling environment (BEE) reform

Figure 9: Intervention results chain

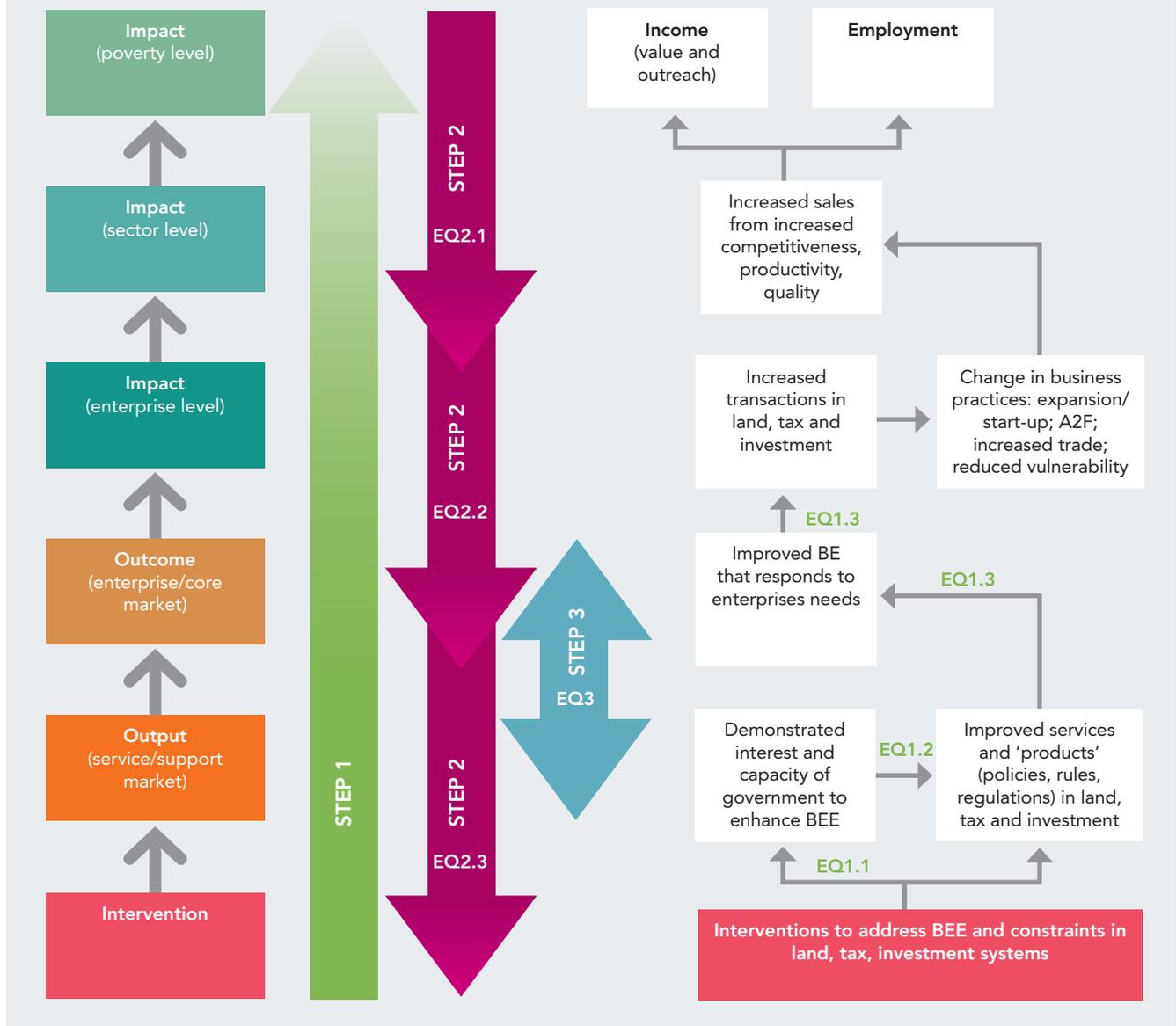


Table 13: Summary of suggested data sources and measurement methods – business enabling environment reform

Data sources	Measurement methods
Step 1: Intervention to market system change (support and core markets) <ul style="list-style-type: none"> Intervention monitoring data. Key informant interviews and focus group discussions. GEMS Enterprise Survey. World Bank. 	<ul style="list-style-type: none"> Political economy analysis. Qualitative analysis and triangulation. Comparative case studies.
Step 2: Changes in income and employment in core market <ul style="list-style-type: none"> Household survey and HNLSS. National accounts. GEMS Enterprise Survey. Relevant reports. Key informant interviews and focus group discussions. 	<ul style="list-style-type: none"> Analysis of relevant data and documentation. Regression or difference-in-difference analysis. Qualitative analysis and triangulation.
Step 3: Compare and triangulate findings – linking core market change to GEMS <ul style="list-style-type: none"> Findings from Steps 1 and 2. 	<ul style="list-style-type: none"> Synthesis and triangulation. Qualitative methods, including Perception Surveys and Most Significant Change analysis.

Table 14: Measurement design and methods selection framework – business enabling environment reform

Research question	Judgement criteria	Suggested indicators	Contextual factors to consider in measurement	Implications for measurement design and methods
Step 1: Intervention to market system change (support and core markets)				
EQ1.1 What have been the direct outputs from GEMS interventions?	<ul style="list-style-type: none"> To what extent have GEMS interventions led to: <ul style="list-style-type: none"> > Enhanced interest and capacity of government to undertake policy and regulatory reform. > Initiation of evidence-based, joined-up policy dialogue 	<ul style="list-style-type: none"> Level of policy dialogue – internally and externally (e.g. number of meetings, etc). Publication of policy documents. 	<ul style="list-style-type: none"> What are the other factors driving the changes in dialogue? Contribution of other GEMS components. 	<ul style="list-style-type: none"> Political economy analysis. Key informant interviews. Intervention monitoring data.
EQ1.2 What changes have occurred at the service/support market level?	<ul style="list-style-type: none"> To what extent has there been an improvement in the 'products' (policies, rules and regulations) in land, tax and investment? 	<ul style="list-style-type: none"> New legislation/tax codes. Number of bureaucratic processes faced by business. 		<ul style="list-style-type: none"> Intervention monitoring data. World Bank Doing Business Indicators.
To what extent can these changes be attributed to GEMS?	<ul style="list-style-type: none"> To what extent has GEMS supported the building of the capacity of State Governments to strengthen BE and introduce reform? To what extent has GEMS created/enhanced mechanisms for dialogue and flow of information between Government and the private sector? To what extent has GEMS worked to change the capacity of the private sector to engage in BE reform? 		<ul style="list-style-type: none"> Can we define the pathways through which GEMS support will lead to reform? Are beneficiaries pre-selected or self-selecting? Is it possible to define a comparison group? 	<ul style="list-style-type: none"> Key informant interviews. Comparative case studies. Qualitative methods, including Perception Surveys and Most Significant Change analysis.
What have been the other causal factors?	<ul style="list-style-type: none"> What are the factors affecting State level capacity to engage in BE reform? What are the factors influencing the level of dialogue and engagement between the Government and private sector in BE reform. 		<ul style="list-style-type: none"> To what extent are there other 'contributory causes' to the achievement of the results? How significant is the intervention in terms of the identifiable change it represents? 	

Table 14: Measurement design and methods selection framework – business enabling environment reform

Research question	Judgement criteria	Suggested indicators	Contextual factors to consider in measurement	Implications for measurement design and methods
EQ1.3 To what extent have the service/support level market changes led to an improvement in the performance and inclusiveness of the core market system?	<ul style="list-style-type: none"> To what extent have regulatory or policy changes at the state level led to improvements in the business environment? To what extent have these changes led to increased transactions in land, tax and investment? 	<ul style="list-style-type: none"> World Bank Doing Business Indicators. Number of transactions in land, tax, investment. Overall enterprise investment levels. 	<ul style="list-style-type: none"> Is there a baseline concerning the market systems for land, tax and investment? Is there a baseline capturing the private sector's views on the key constraints to the conduct of business? 	<ul style="list-style-type: none"> Key informant interviews and focus group discussions. Enterprise survey.
Step 2: Changes in income and employment in core market				
EQ2.1 How have the level and composition of income and employment changed (in the relevant sector/geographic area)?	<ul style="list-style-type: none"> What changes in income and employment can we identify in the sector/geographic region in which interventions have been focused? 	<ul style="list-style-type: none"> Average incomes. Employment levels and wages. 	<ul style="list-style-type: none"> Do results include data on other characteristics of the population – to enable matching etc? 	<ul style="list-style-type: none"> General Household Survey and HNLSS (although infrequent). National accounts. GEMS Enterprise Survey.
EQ2.2 What market-level factors have led to the changes in income and employment?	<ul style="list-style-type: none"> What have been the key determinants of: <ul style="list-style-type: none"> > Improved firm performance and growth. > Increased competitiveness, productivity and quality. > Growth in incomes and employment. > Has there been a change in business practices, increased trade, reduced vulnerability? 	<ul style="list-style-type: none"> Sources of income and employment. Firm growth (value). Systemic change and sustainability. Key determinants of changes to firm performance. 	<ul style="list-style-type: none"> What sample size is required for it to be representative at a national/ State level? To what extent are secondary data sources available, timely and reliable? 	<ul style="list-style-type: none"> GEMS Enterprise Survey to establish improved growth and firm performance. Regression or difference-in-difference analysis of determinants of sector growth. Comparative analysis with other states where GEMS did not provide support. Key informant interviews and focus group discussions to establish causes of improved firm performance and importance of policies and business environment. Analysis of relevant data and documents.

Table 14: Measurement design and methods selection framework – business enabling environment reform

Research question	Judgement criteria	Suggested indicators	Contextual factors to consider in measurement	Implications for measurement design and methods
EQ2.3 What have been the causes of any changes in market conditions?	<ul style="list-style-type: none"> • What have been the causes of the changes identified in EQ2.2? • What have been the causes of identified improvements in the business environment? 			<ul style="list-style-type: none"> • GEMS Enterprise Survey. • Doing Business Survey. • Key informant interviews and focus group discussions to establish causes of improved firm performance and importance of policies and business environment. • Analysis of relevant data and documents.
Step 3: Compare and triangulate findings – linking core market change to GEMS				
EQ3.1 To what extent can the market level changes observed in Step 2 be attributed to GEMS interventions?	<ul style="list-style-type: none"> • To what extent have the causes of improved firm performance and income and employment growth been affected by the outputs of GEMS support relating to the BEE. 		<ul style="list-style-type: none"> • Time lag between the GEMS support and changes to the BEE and then another time lag between changes in BEE and feeding into improved firm performance and income and employment change. • Significance of GEMS interventions in terms of business environment systems overall. • Ensure that deadweight loss and displacement are taken into account in triangulation exercise. 	<ul style="list-style-type: none"> • Triangulation of the findings from Steps 1 and 2 to build the evidence that the improved Business Enabling Environment due to GEMS has: <ul style="list-style-type: none"> > <i>plausibly</i> resulted in changes in business performance in the core market which in turn have > <i>plausibly</i> resulted in quantifiable changes in levels of employment and income for poor people. • Qualitative methods, including Perception Surveys and Most Significant Change analysis.

Business support services

Figure 10: Intervention results chain

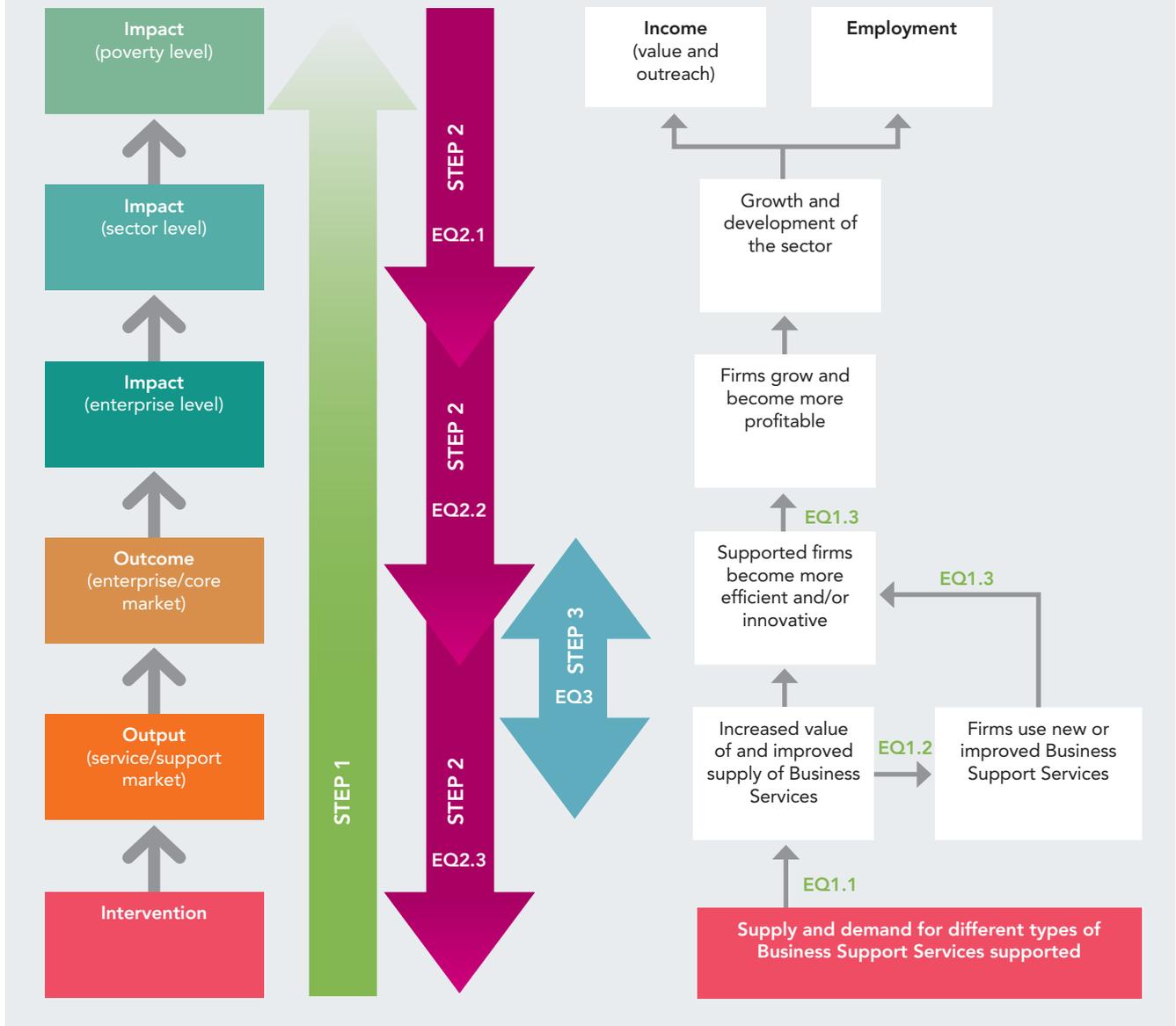


Table 15: Summary of suggested data sources and measurement methods – business support services

	Data sources	Measurement methods
Step 1: Intervention to market system change (support and core markets)	<ul style="list-style-type: none"> Key informant interviews. Intervention monitoring data. GEMS Enterprise Survey. 	<ul style="list-style-type: none"> Comparative case studies. Quantitative analysis of survey results. Outcome Harvesting. Most significant change techniques.
Step 2: Changes in income and employment in core market	<ul style="list-style-type: none"> Household survey and HNLSS. National accounts. GEMS Enterprise Survey. Relevant reports. Key informant interviews and focus group discussions. 	<ul style="list-style-type: none"> Analysis of relevant data and documentation. Regression or difference-in-difference analysis. Qualitative analysis and triangulation.
Step 3: Compare and triangulate findings – linking core market change to GEMS	<ul style="list-style-type: none"> Findings from Steps 1 and 2. 	<ul style="list-style-type: none"> Synthesis and triangulation. Qualitative methods, including Perception Surveys and Most Significant Change analysis.

Table 16: Measurement design and methods selection framework – business support services

Research question	Judgement criteria	Suggested indicators	Contextual factors to consider in measurement	Implications for measurement design and methods
Step 1: Intervention to market system change (support and core markets)				
EQ1.1 What have been the direct outputs from GEMS interventions?	<ul style="list-style-type: none"> To what extent have GEMS interventions led to: Increased appreciation of value of Business Support Services. Improved supply of Business Support Services. 	<ul style="list-style-type: none"> Firms' awareness of the existence of BSS. Firms' perceptions of the value of BSS. Number of firms offering BSS. Variety of BSS provided. 	<ul style="list-style-type: none"> What are the other factors driving the changes in the factors identified? 	<ul style="list-style-type: none"> Key informant interviews. Intervention monitoring data. GEMS Enterprise Survey.
EQ1.2 What changes have occurred at the service/support market level?	<ul style="list-style-type: none"> To what extent has there been an increased use of Business Support Services by firms? 	<ul style="list-style-type: none"> Value of BSS procured by firms. 	<ul style="list-style-type: none"> BSS should be defined in the narrow context of the GEMS intervention. Important to identify a comparison group if possible. 	<ul style="list-style-type: none"> Key informant interviews. Intervention monitoring data. GEMS Enterprise Survey.
To what extent can these changes be attributed to GEMS?	<ul style="list-style-type: none"> To what extent has GEMS support been a contributory factor in the increased use of new or improved Business Support Services? 		<ul style="list-style-type: none"> Can we define the pathways through which GEMS support will lead to the use of BSS? Are beneficiaries pre-selected or self-selecting? Is it possible to define a comparison group? 	<ul style="list-style-type: none"> Key informant interviews. Comparative case studies. Qualitative methods, including Perception Surveys and Most Significant Change analysis.
What have been the other causal factors?	<ul style="list-style-type: none"> What other factors have affected the market for Business Support Services? 		<ul style="list-style-type: none"> To what extent are there other 'contributory causes' to the achievement of the results? How significant is the intervention in terms of the identifiable change it represents? 	
EQ1.3 To what extent have the service/support level market changes led to an improvement in the performance and inclusiveness of the core market system?	<ul style="list-style-type: none"> To what extent have changes in the use of Business Support Services made firms more efficient and/or innovative? Have any changes in efficiency and/or innovation led to company growth and increased profitability? 	<ul style="list-style-type: none"> Costs of production. Adoption of new technologies or production/distribution techniques. Firm sales and profitability. 	<ul style="list-style-type: none"> What are the other influences of efficiency, innovation and enterprise performance? Is the market growing or shrinking? 	<ul style="list-style-type: none"> Comparison of firm performance with firms not adopting new product, service or process.

Table 16: Measurement design and methods selection framework – business support services

Research question	Judgement criteria	Suggested indicators	Contextual factors to consider in measurement	Implications for measurement design and methods
Step 2: Changes in income and employment in core market				
EQ2.1 How have the level and composition of income and employment changed (in the relevant sector/ geographic area)?	<ul style="list-style-type: none"> • What changes in income and employment can we identify in the sector/geographic region in which interventions have been focused? 	<ul style="list-style-type: none"> • Average incomes. • Employment levels and wages. 	<ul style="list-style-type: none"> • Do results include data on other characteristics of the population – to enable matching etc? 	<ul style="list-style-type: none"> • General Household Survey and HNLSS (although infrequent). • National accounts. • GEMS Enterprise Survey.
EQ2.2 What market-level factors have led to the changes in income and employment?	<ul style="list-style-type: none"> • What have been the key determinants of: • Improved firm performance and growth. • Increased competitiveness, productivity and quality. • Growth in incomes and employment. • Is there evidence of firms in the sector being more innovative and adopting new technologies or business practices? 	<ul style="list-style-type: none"> • Sources of income and employment. • Firm growth (value). • Systemic change and sustainability. • Key determinants of changes to firm performance. 	<ul style="list-style-type: none"> • What sample size is required for it to be representative at a national/ State level? • To what extent are secondary data sources available, timely and reliable? 	<ul style="list-style-type: none"> • GEMS Enterprise Survey to establish improved growth and firm performance. • Regression or difference-in-difference analysis of determinants of sector growth. Comparison analysis with other states where GEMS did not provide support. • Key informant interviews and focus group discussions to establish causes of improved firm performance and importance of policies and business environment. • Analysis of relevant data and documents.
EQ2.3 What have been the causes of any changes in market conditions?	<ul style="list-style-type: none"> • What have been the causes of the changes identified in EQ2.2? • What have been the causes of identified innovations or adoption of new technologies and business practices? 		<ul style="list-style-type: none"> • What are the sector level drivers of growth and performance? • Is the sector growing? 	<ul style="list-style-type: none"> • GEMS Enterprise Survey. • Doing Business Survey. • Key informant interviews and focus group discussions to establish causes of improved firm performance and importance of policies and business environment. • Analysis of relevant data and documents.

Table 16: Measurement design and methods selection framework – business support services

Research question	Judgement criteria	Suggested indicators	Contextual factors to consider in measurement	Implications for measurement design and methods
Step 3: Compare and triangulate findings – linking core market change to GEMS				
EQ3.1 To what extent can the market level changes observed in Step 2 be attributed to GEMS interventions?	<ul style="list-style-type: none"> To what extent have the causes of improved firm performance and income and employment growth been affected by the outputs of GEMS support relating to Business Support Services. 		<ul style="list-style-type: none"> Time lag between the GEMS support and changes to the provision of Business Support Services and then another time lag between changes in BSS and feeding into improved firm performance and income and employment change. Significance of GEMS interventions in terms of BSS overall. Ensure that deadweight loss and displacement are taken into account in triangulation exercise. 	<ul style="list-style-type: none"> Triangulation of the findings from Steps 1 and 2 to build the evidence that the improved BSS due to GEMS has: <ul style="list-style-type: none"> > <i>plausibly</i> resulted in changes in business performance in the core market which in turn have > <i>plausibly</i> resulted in quantifiable changes in levels of employment and income for poor people. Qualitative methods, including Perception Surveys and Most Significant Change analysis.

6 CATEGORIZATION OF GEMS INTERVENTIONS

		Support to BMOs and related advocacy and industry coordination	Skills development and capacity building	Establishment of new or improved products, services or processes	Business enabling environment reform	Business support services
GEMS 1		3	2	8		
1	Feed Finished Animal for Sallah 2011			✓		
2	Feed Finished Animal Through Credit Programme			✓		
3	Improved abattoirs through Dentata			✓		
4	Creating better business linkages			✓		
5	Brand awareness and brand promotion		✓			
6	Improving skills of FLG actors through training		✓			
7	Formation of Regional Association Lapan	✓				
8	Formation of National Association	✓				
9	Demonstration of Policy lobbying through Lapan	✓				
10	Access to finance			✓		
11	Creating access to tools and equipment			✓		
12	Creating access to input (leather, sole, accessories etc)			✓		
13	Introduction of trade shows			✓		
GEMS 2		5	6	12		2
14	Advocacy and marketing support to BMOs to create visibility with members and external stakeholders and generate income	✓				
15	Provide technical support to bolster evidence base and data about BMO members and their problems	✓				
16	Provide support to develop services for BMOs to improve job opportunities for its artisan members, assist in initial operations and facilitate linkages, e.g. connecting them with construction companies	✓				
17	Support to the development of internal structures of the LoCC	✓				
18	Development of internal and external communication and advocacy capacity of the LoCC	✓				
19	Support formal vocational training institutions in their institutional strengthening and organisational development		✓			
20	Support specialised training organisations in curriculum development, training aids and communications for the CRES		✓			
21	Support BMOs, training organisations and other institutions or individual trainers (key market players) to develop and implement off the job skills training for TBs		✓			
22	Support key market players to make agreements of cooperation to develop and implement off the job skills training for TBs		✓			

		Support to BMOs and related advocacy and industry coordination	Skills development and capacity building	Establishment of new or improved products, services or processes	Business enabling environment reform	Business support services
23	Support formal construction companies to develop internal vocational training capacity		✓			
24	Support informal firms to develop internal vocational training capacity		✓			
25	Create databases of artisans to feed into linkage services from the builders artisans market			✓		
26	Identify and support service provider(s) to implement and market the linkage services to stakeholders			✓		
27	Support service providers to facilitate training and awareness workshop on contracts and negotiation management			✓		
28	Support service provider to develop and implement a communications strategy to build the B2B capacity of artisans			✓		
29	Map the housing PPP landscape			✓		
30	Fill evidence gaps of effective demand and supply of affordable housing			✓		
31	Facilitate roundtable meetings and actions plans with PPP stakeholders			✓		
32	Facilitate availability of building technology suitable for affordable housing			✓		
33	Implement capacity building programmes for MOH stakeholders in response to the needs and gaps identified in the roundtable action plans			✓		
34	Market research for specific input supplies for CRES			✓		
35	Technology transfer and piloting of viable input supplies for CRES			✓		
36	Support commercialization and market uptake of successful input supplies for CRES			✓		
37	Provide support to service providers to develop and implement business models and business services in the CRES					✓
38	Support the development of demand within the CRES for business management services					✓
GENS 3		13	2		59	
Federal						
39	Formulation of Public Private Engagement Mechanism (PPEM)	✓				
40	Development of Business Environment Improvement Strategy (BEIS)				✓	
41	Application of a Nigerian Policy Framework for Investment (based on the OECD PFI)				✓	
42	Sub-national Doing Business Survey				✓	
43	Prioritized Doing Business Action Points - Business registration (including online business registration)				✓	
44	Establishing Public Private Engagement Mechanism Advocacy, industry coordination and information services	✓				
45	Support to Federal Minister of Finance Tax Policy Unit Assistance				✓	
46	Support for a Policy dialogue between the (NERC) and (NASME) on the implementation of the multi-year tariff order (MYTO)				✓	

		Support to BMOs and related advocacy and industry coordination	Skills development and capacity building	Establishment of new or improved products, services or processes	Business enabling environment reform	Business support services
Kano						
47	Formulation of Public Private Engagement Mechanism (PPEM)	✓				
48	Development of Business Environment Improvement Strategy (BEIS)				✓	
49	Application of sub-national Policy Framework for Investment (based on the OECD PFI)				✓	
50	Establishing Public Private Engagement Mechanism	✓				
51	Training of Female Land Officers on sporadic land registration		✓			
52	Workshop on Land Registration with information officers from State MDAs and NOA officers [delivered]				✓	
53	Land Regularization/Systematic Registration of Land				✓	
54	Investor Handbook [in the works: to be delivered Mid-November]				✓	
55	Workshop on tax with treasurers and tax officers from 44 local government areas [14 November]				✓	
56	SOLA training related to land intervention [under way for a week]		✓			
57	Assessing the level of need for support to GoK [delivered]				✓	
58	MSME Strategy/Policy Support to MoCI and SEMT. iPlan submitted for approval				✓	
59	Tax Harmonization/Tax for Service: iPlan in the works-ready by 6th November				✓	
60	Informal sector/rural enterprise access to finance				✓	
61	Taxpayer information	✓				
Kaduna						
62	Formulation of Public Private Engagement Mechanism (PPEM)	✓				
63	Development of Business Environment Improvement Strategy (BEIS)				✓	
64	Application of sub-national Policy Framework for Investment (based on the OECD PFI)				✓	
65	Establishing Public Private Engagement Mechanism	✓				
66	Tax harmonization				✓	
67	Integration of land registry systems and improving public access to land information in Kaduna State				✓	
68	Kaduna Industrial and Finance Company Improvement Strategy Work Plan				✓	
Cross River						
69	Formulation of Public Private Engagement Mechanism (PPEM) Advocacy, industry coordination and information services.	✓				
70	Development of Business Environment Improvement Strategy (BEIS)				✓	

		Support to BMOs and related advocacy and industry coordination	Skills development and capacity building	Establishment of new or improved products, services or processes	Business enabling environment reform	Business support services
71	Application of sub-national Policy Framework for Investment (based on the OECD PFI)				✓	
72	Establishing Public Private Engagement Mechanism Advocacy, industry coordination and information services.	✓				
73	Tax harmonization				✓	
74	Linkages for access to finance and infrastructural support to Micro Enterprise Development Agency (MEDA)				✓	
	Lagos					
75	Formulation of Public Private Engagement Mechanism (PPEM)	✓				
76	Development of Business Environment Improvement Strategy (BEIS)				✓	
77	Application of sub-national Policy Framework for Investment (based on the OECD PFI)				✓	
78	Prioritised Doing Business Action Points - Revenue Administration Streamlining in Lagos Internal Revenue Service (LIRS), as part of addressing 'Doing Business' indicators				✓	
79	Development of a Strategic Urban Regeneration Framework				✓	
80	Land Market Study				✓	
81	Partner with Lagos State Government in the organization of Corporate Assembly and the commemoration of Africa Industrialization Day	✓				
82	Reviewing and Updating of Accounting and Audit Manuals for office Auditor-General for Local Governments				✓	
83	Support to Lagos Inland Revenue Service (LIRS) on Registration; Accounts; Cashless Arrangements; Data Warehousing; Tax Audit tools and processed				✓	
84	Tax-for-Service/Improvement of Tax Harmonization Implementation in Selected LGAs				✓	
85	Reviewing and Updating LGA Accounting and Audit Manuals				✓	
86	Tax Harmonization Improvement Project in up to five pilot LGAs				✓	
87	Improved Tax Complaints Process Project				✓	
88	Lagos Informal Sector Business Management Development Program				✓	
89	Enterprise Support Units in selected business-oriented LGAs				✓	
90	Technical assistance for the establishment of an Investment Promotion Agency (IPA)				✓	
91	Support to the Ministry of Women Affairs, Lagos State on the development of Women's Economic Empowerment (WEE) Strategy/Policy				✓	
92	Development of Industrial and Competitiveness Policy				✓	

		Support to BMOs and related advocacy and industry coordination	Skills development and capacity building	Establishment of new or improved products, services or processes	Business enabling environment reform	Business support services
93	Partnership with Manufacturers Association of Nigeria in commissioning a Study on EU (Economic Partnership Agreement-EPA) and ECOWAS (Common External Tariffs) Protocols and their impact on the manufacturing sector in Lagos State				✓	
94	Formulation of Public Private Engagement Mechanism (PPEM)	✓				
95	Development of Business Environment Improvement Strategy (BEIS)				✓	
96	Application of sub-national Policy Framework for Investment (based on the OECD PFI)				✓	
97	Prioritised Doing Business Action Points – Revenue Administration Streamlining in Lagos Internal Revenue Service (LIRS), as part of addressing 'Doing Business' indicators				✓	
98	Development of a Strategic Urban Regeneration Framework				✓	
99	Land Market Study				✓	
100	Partner with Lagos State Government in the organization of Corporate Assembly and the commemoration of Africa Industrialization Day	✓				
101	Reviewing and Updating of Accounting and Audit Manuals for office Auditor-General for Local Governments				✓	
102	Support to Lagos Inland Revenue Service (LIRS) on Registration; Accounts; Cashless Arrangements; Data Warehousing; Tax Audit tools and processed				✓	
103	Tax-for-Service/Improvement of Tax Harmonization Implementation in Selected LGAs				✓	
104	Reviewing and Updating LGA Accounting and Audit Manuals				✓	
105	Tax Harmonization Improvement Project in up to 5 pilot LGAs				✓	
106	Improved Tax Complaints Process Project				✓	
107	Lagos Informal Sector Business Management Development Program				✓	
108	Enterprise Support Units in selected business-oriented LGAs				✓	
109	Technical assistance for the establishment of an Investment Promotion Agency (IPA)				✓	
110	Support to the Ministry of Women Affairs, Lagos State on the development of Women's Economic Empowerment (WEE) Strategy/Policy				✓	
111	Development of Industrial and Competitiveness Policy				✓	
112	Partnership with Manufacturers Association of Nigeria in commissioning a Study on EU (Economic Partnership Agreement-EPA) and ECOWAS (Common External Tariffs) Protocols and their impact on the manufacturing sector in Lagos State				✓	

		Support to BMOs and related advocacy and industry coordination	Skills development and capacity building	Establishment of new or improved products, services or processes	Business enabling environment reform	Business support services
GEMS 4		1	1	4	1	2
113	Process upgrading interventions			✓		
114	Product upgrading interventions			✓		
115	Functional upgrading interventions			✓		
116	Channel upgrading interventions			✓		
117	Supply chain management interventions					✓
118	Mobile money interventions					✓
119	Association strengthening	✓				
120	Policy and advocacy interventions				✓	
121	Skills development interventions		✓			
TOTAL GEMS		22	11	24	60	4

