



Demographic Dividend and SDGs in AFRICA

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Outline

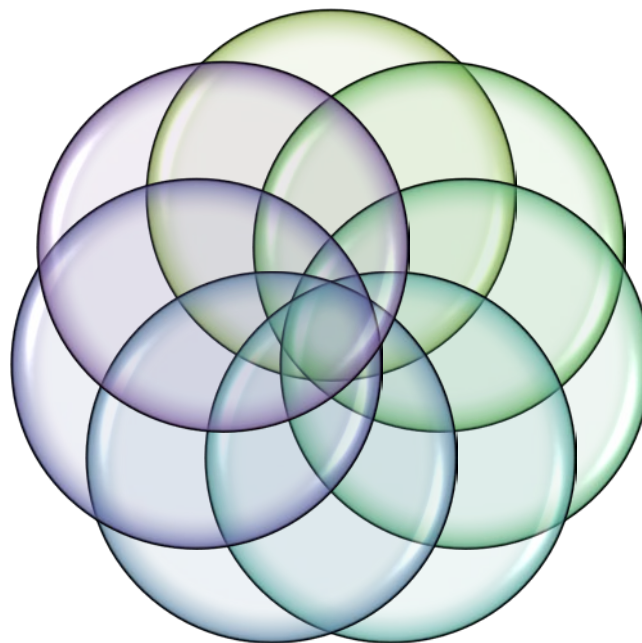
- I. Context
- II. Concept of DD monitoring index
- III. Methodology of DD monitoring index
- IV. Gap analysis and investment targeting
- V. Senegal case study

****Populations are growing very quickly in Africa: 2.7% per year. twice faster than the world average. which is about 1.2% (AU. 2016)**

****Every year. about 10 to 12 million young people join the labor market (Afrique Expansion. 2016)**

****Youth without professional prospects can be considered a lost generation. which is a threat to social stability (ILO. 2014)**

****60% of unemployed African people are 15-24 years old (UNFPA. 2016)**



****More than 25% of the worldwide population will be adult (UNFPA. 2016)**

****Based on projections for 2045. Africa's population will be the youngest in the world: 400 million young people (UNFPA. 2016)**

****African youth (15-24 years): 37% of the population has attained working age (UNFPA. 2016)**

» » » CONCEPT OF DD MONITORING INDEX (DDMI)

A synthesis tool that facilitates understanding of all information related to DD

A demographic dividend monitoring and evaluation system for different countries

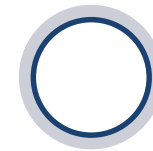
A visual representation with synthesis index



Understanding DD
progress in each
country



Monitoring the
evaluation of key
indicators in
different countries



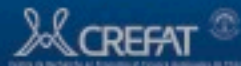
Making
comparisons at
local, national and
sub-regional levels



DDMI Concept

Main Linkages between Demographic Dividend Monitoring index and AU Pillars

AU DD Pillars	Pillars Definition	Basic Link	Theoretical Approach	Background	Dimensions
P1	Employment and entrepreneurship	Population structure	Lifecycle theory	NTA methodology	1: Economic dependancy coverage
P1		Subjective economy	Welfare theories of well-being	Better life index methodology	2: Quality of living environment
P1		Normative economy		Poverty dynamics methodology	3: Poverty exiting
P2	Education and skills development	Education	Human capital theory	HDI methodology	4: Extended human development
P3	Health and wellbeing	Health			
P4	Rights, governance and youth empowerment	Institutions, governance	Institutional theory, regional economy theory	Clusters methodology	5: Networks and territories



The DDMI

Based on AU DD
pillars

Monitoring tool

Set of
demographic
dividend indicators

Analysis and
modeling tool

SDGs'
complementary
monitoring tool

Opportunity to
make public policy
proposals

Innovative
barometer

Scientific basis for
effective and
efficient advocacy

DD & SDGs
strategic
investment
targeting



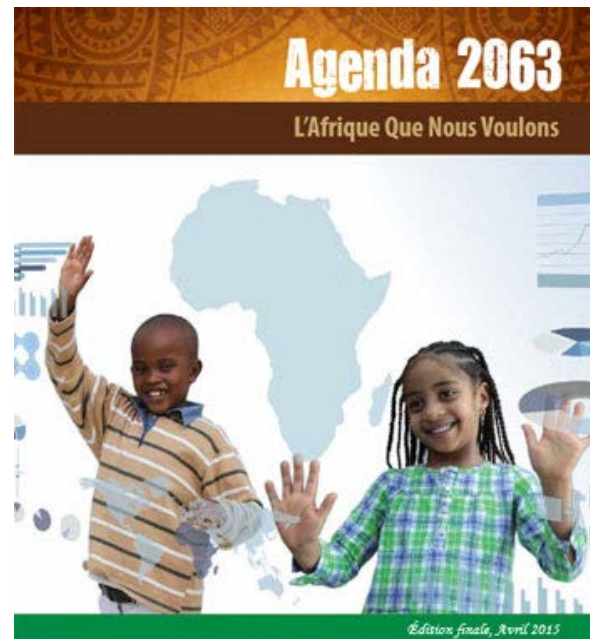
DDMI Strategic Interactions

OBJECTIFS DE DÉVELOPPEMENT DURABLE



15 SDGs taken into account by DDMI

6 aspirations related to DDMI





DDMI Concept & SDGs Linkages

The synthetic index for demographic dividend monitoring includes five dimensions

Dimensions	Synthetic Index	Sub Dimensions	SDGs Link
Lifecycle deficit	Economic dependancy coverage index (EDCI)	Consumption	SGD1. SGD3. SGD4. SGD5. SGD8. SGD9. SGD10
		Labor income	
		Asset income	
		Transfer flows	
		Saving	
Quality of living environment	Quality of living environment index (QLEI)	Housing	SGD3. SGD6. SGD11. SGD13. SGD16
		Social networks	
		Environment	
		Civic engagement	
		Life satisfaction	
		Safety	
		Work-life balance	



DDMI Concept & SDGs Linkages

The Synthetic Index for Demographic Dividend Monitoring include 5 dimensions:

Dimensions	Synthetic Index	Sub Dimensions	SDGs Link
Poverty transition	Poverty exiting synthetic index (PESI)	Poverty trap	SGD1. SGD2. SGD3. SGD4. SGD10
		Poverty-stricken	
		Poverty exiting	
		Poverty free	
Extended human capital	Extended human development index (EHDI)	Education	SGD1. SGD3. SGD4. SGD5. SGD10
		Health	
		Living standards	
Networks and territories	Synthetic index of networks and territories (SINT)	Urbanization	SGD2. SGD6. SGD10. SGD11. SGD16. SGD17
		Migration	
		Financial flows	
		Basics infrastructure	

» » » METHODOLOGY OF DD MONITORING INDEX (DDMI)

❖ Economic Dependancy Coverage Index

- **Objective:** Measure the capacity of a country to respond to social demands related to the young- and old-age lifecycle deficits
- **Theory:** Life Cycle Theory. Modigliani & Brumberg (1954)
- **Main Source:** (UN-NTA 2013). Lee & Mason (2011)
- **Normative Method**

Surplus = Consumption - labour Income

$$E.D.C.I = \frac{\textit{surplus}}{\textit{deficit(youth defict+seniors deficit)}}$$

❖ **Quality of Living Environment Index**

- **Objective:** Living environment refers to all elements that are part of a person's life and how this environment influences the quality of life
- **Theory:** Welfare theories of well-being Easterlin (2010). Dasgupta (1995). Nussbaum & Sen(1993). Sen (1989.1997. 2001)
- **Main Source:** OCDE 2011. 2013
- **Normative Method**

Weighted average of the standard sub-dimensions index

❖ Poverty Exiting Synthetic Index

- **Objective:** Synthesize the level of poverty transition within populations
 - Welfare theories of well-being
 - **Theory: Main Source:** Dang & Lanjouw (2013). Dang. Lanjouw. Luoto. & McKenzie (2011)
- **Normative Method**

P == Poor ; NP== Non Poor

$$P.E.S.I = \left(\frac{P \rightarrow NP}{NP \rightarrow P + P \rightarrow NP} ; \frac{NP \rightarrow NP}{NP \rightarrow NP + P \rightarrow P} \right)^{1/2} ;$$

❖ **Extend Human Development Indicator**

- **Objective:** Know the level of human development of a country or a region
- **Theory:** Human Capital Theory
- **Main Source:** Schultz. Becker. Sen. and UNDP(2015)
- **Normative Method**

$$E.H.D.I = \sqrt[3]{IH * IE * ICons}$$

IH== Health index

IE== Education Index

Icons== Consumption index

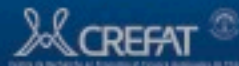
❖ **Networks and Territories Synthetic Index**

- **Objective:** Collect information about territorial mobility by describing the attractiveness of zones. human migration. financial flows. goods and services flows as well as the distribution of infrastructures in a territory
- **Theories:** Cluster Theory. Theory of Social Change. Institutional Theory. Regional Economic Development Theory
- **Normative Method**

Weighted average of the standard sub dimensions index

- All indicators used in DDMI framework are first normalized between 0 and 1
- DDMI is a synthetic index which is computed as geometric average of the five previous indices
- The following method is used to calculate DD Monitoring Index (DDMI)

$$D.D.M.I = \sqrt[5]{EDCI * QLEI * PESI * EHDI * NTSI}$$



READING GRID SCALE

How to interpret the DDMI SCALE ?

**Between 80%
and 100%**

- **HIGH:** country harnesses DD & attains SD

**Between 50% and
79%**

- **MEDIUM:** country needs investment to harness DD & attain SD

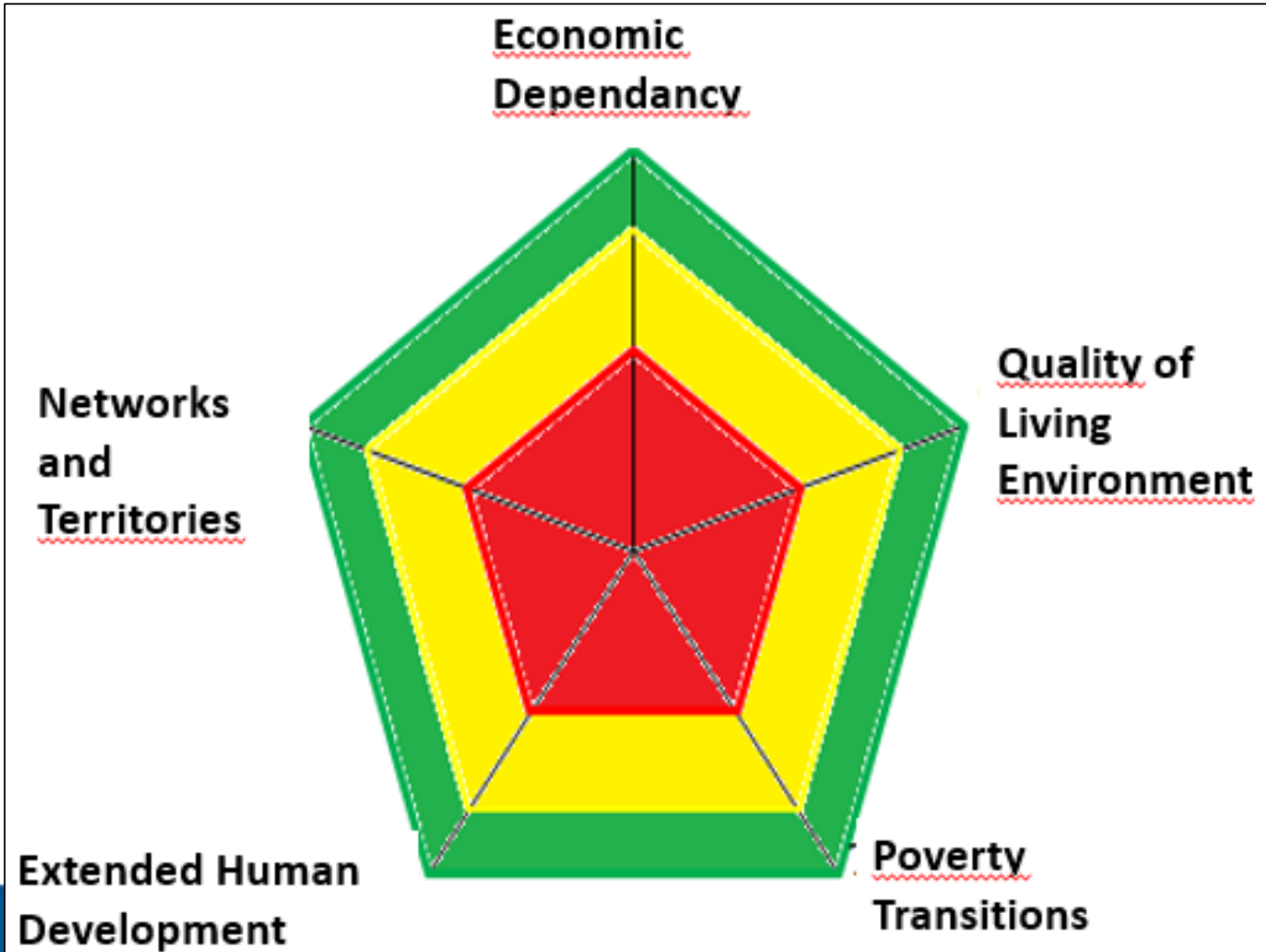
**Between 0%
and 49%**

- **WEAK:** country doesn't harness DD or attain SD; several strategies and investments are needed




» » » GAP ANALYSIS & INVESTMENT TARGETING

CHOOSING THE TARGET

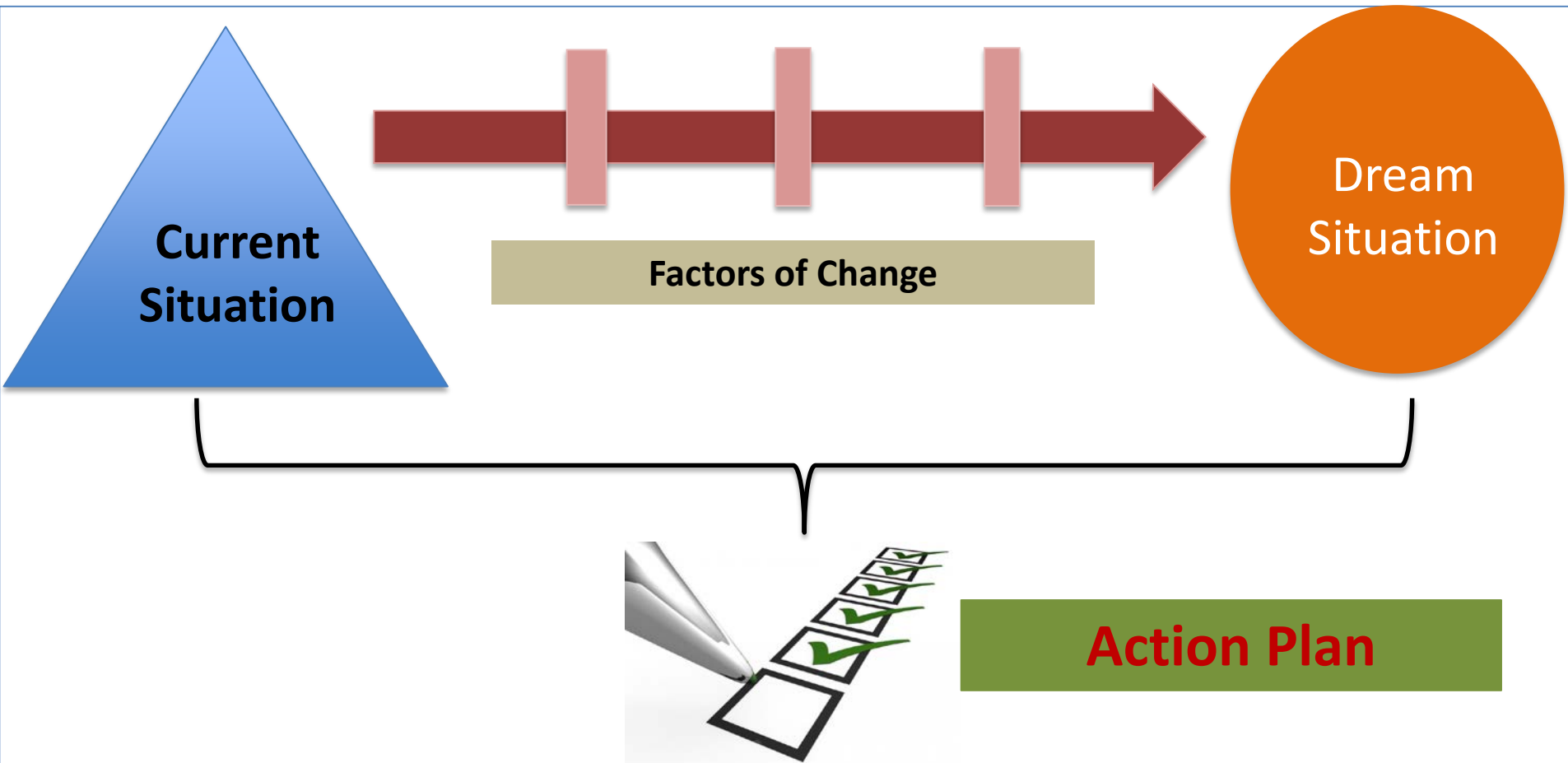
DDMI GRAPH



Target :

-  < 50%
-  50% - 80%
-  >80%

GAP ANALYSIS



SECTORAL AND STRATEGIC INVESTMENTS TARGET

Extend human development index:
EHDl

Sub-dimension:
Education

MSD & ESD

Elasticity to historical budget

Expected schooling duration (ESD)

α

Medium schooling duration (MDS)

β

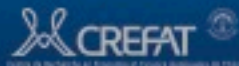
» » » CASE STUDY OF SENEGAL



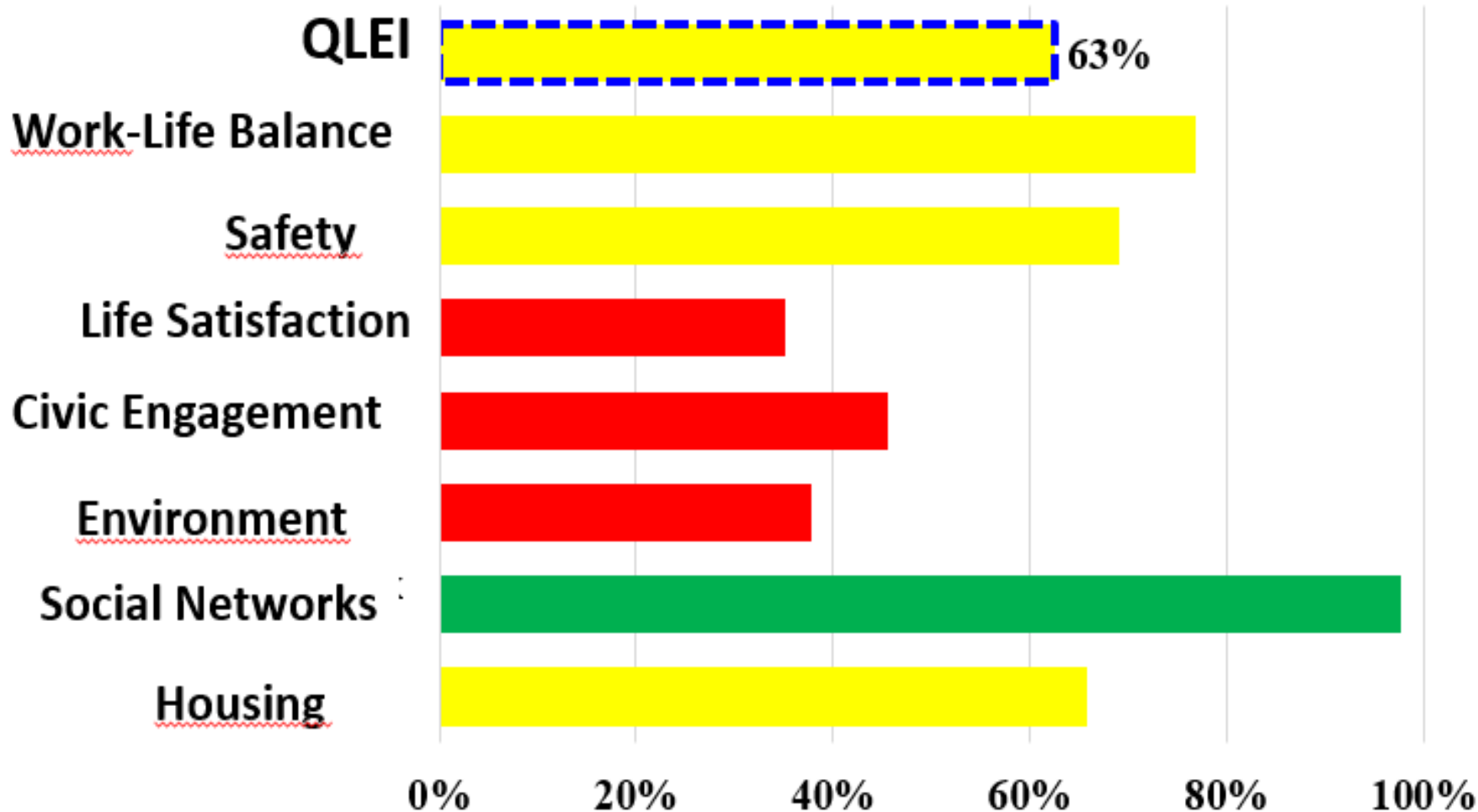
DIMENSION 1 RESULTS

Recap (*amount in billions XOF*)

Deficit	Youth (0-26 ans)	2.608.03 (96% of deficit)
	Seniors (63 years and above)	100.02 (4% of deficit)
Surplus 27-62 years		1.228.54
Overall lifecycle deficit		1.479.51
		22% of GDP
EDCI		45.4%



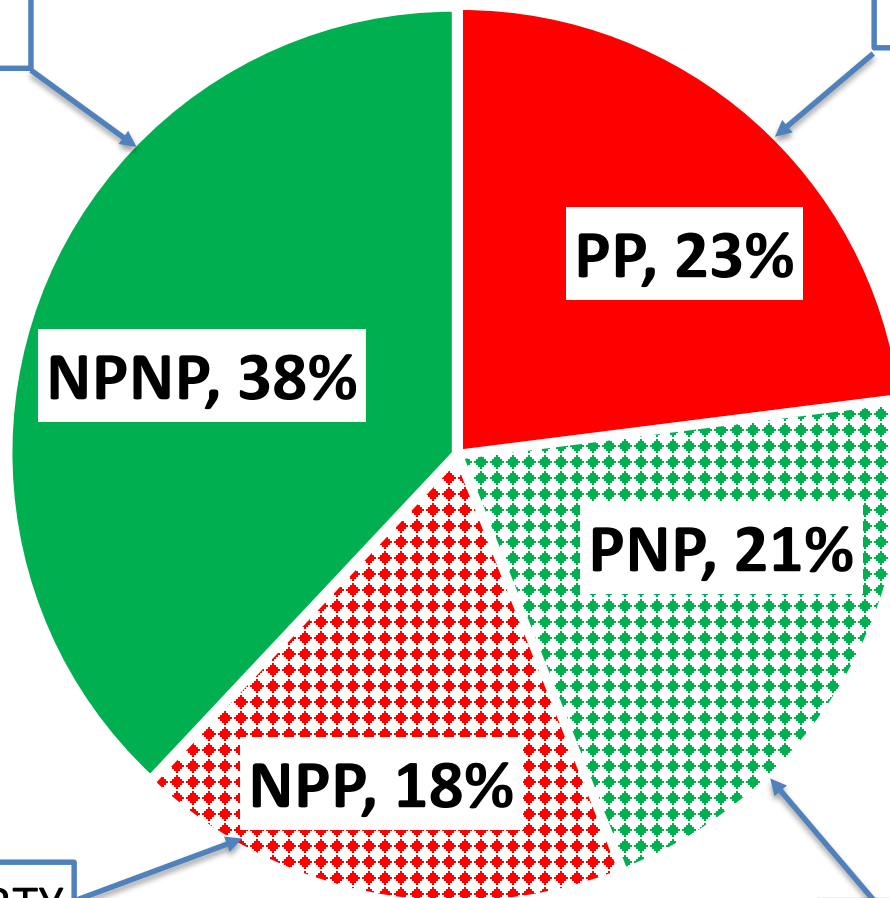
DIMENSION 2 RESULTS



IN POVERTY

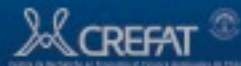
CHRONIC POVERTY

PESI: 53.8%



FALLING INTO POVERTY

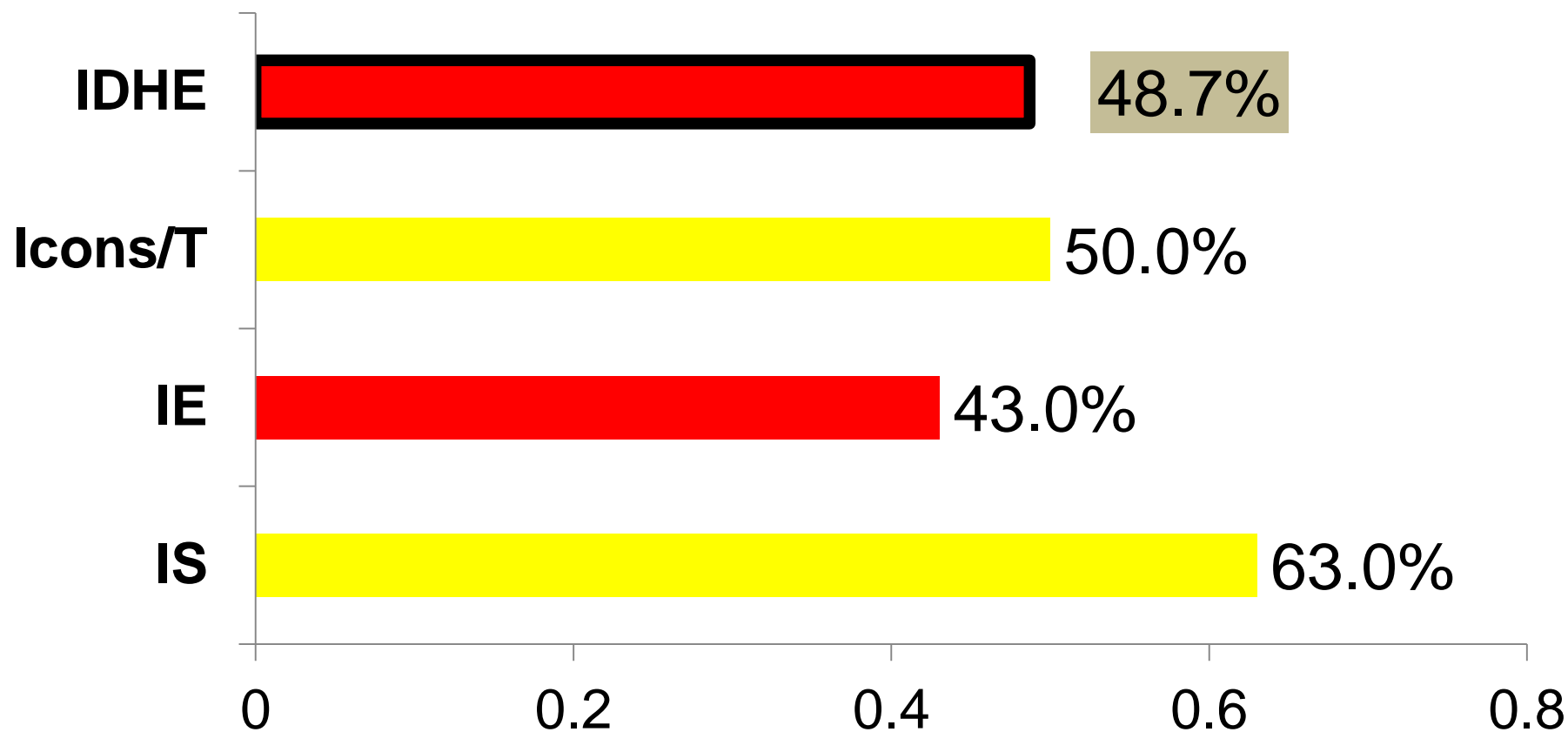
EXITING FROM POVERTY



DIMENSION 4 RESULTS

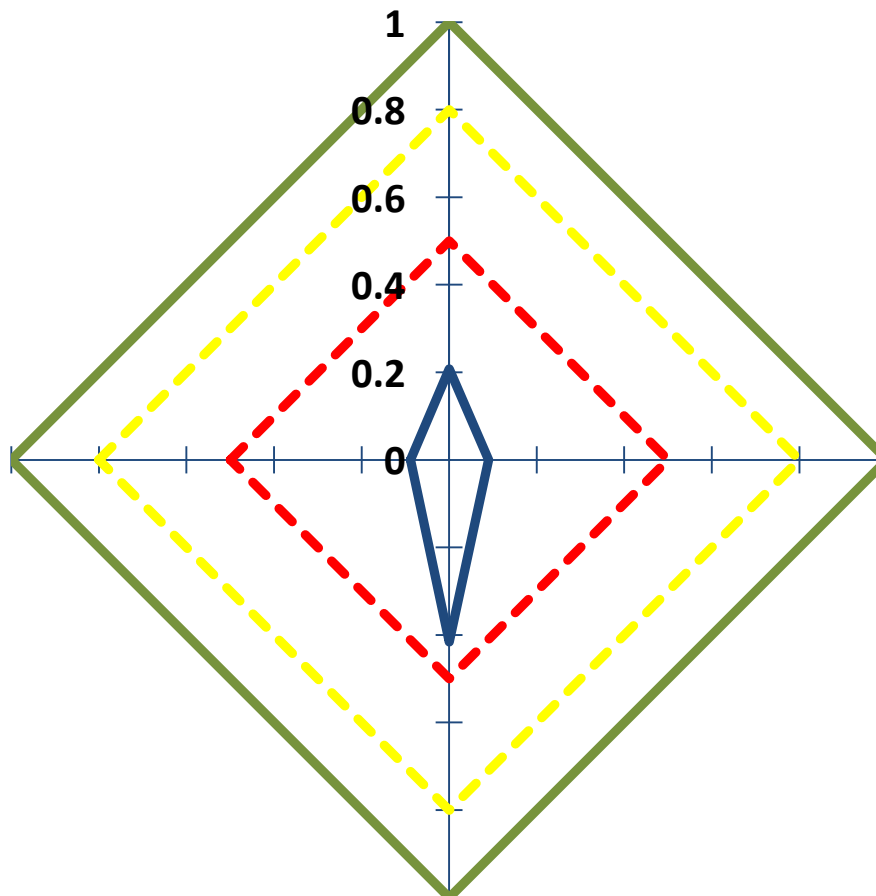
IS: Health index; **IE:** Education index;
Icons/T: Consumption per capita index

IDHE/EHDI: Extended human development indicator



Urbanization index

Financial flows and capacities index

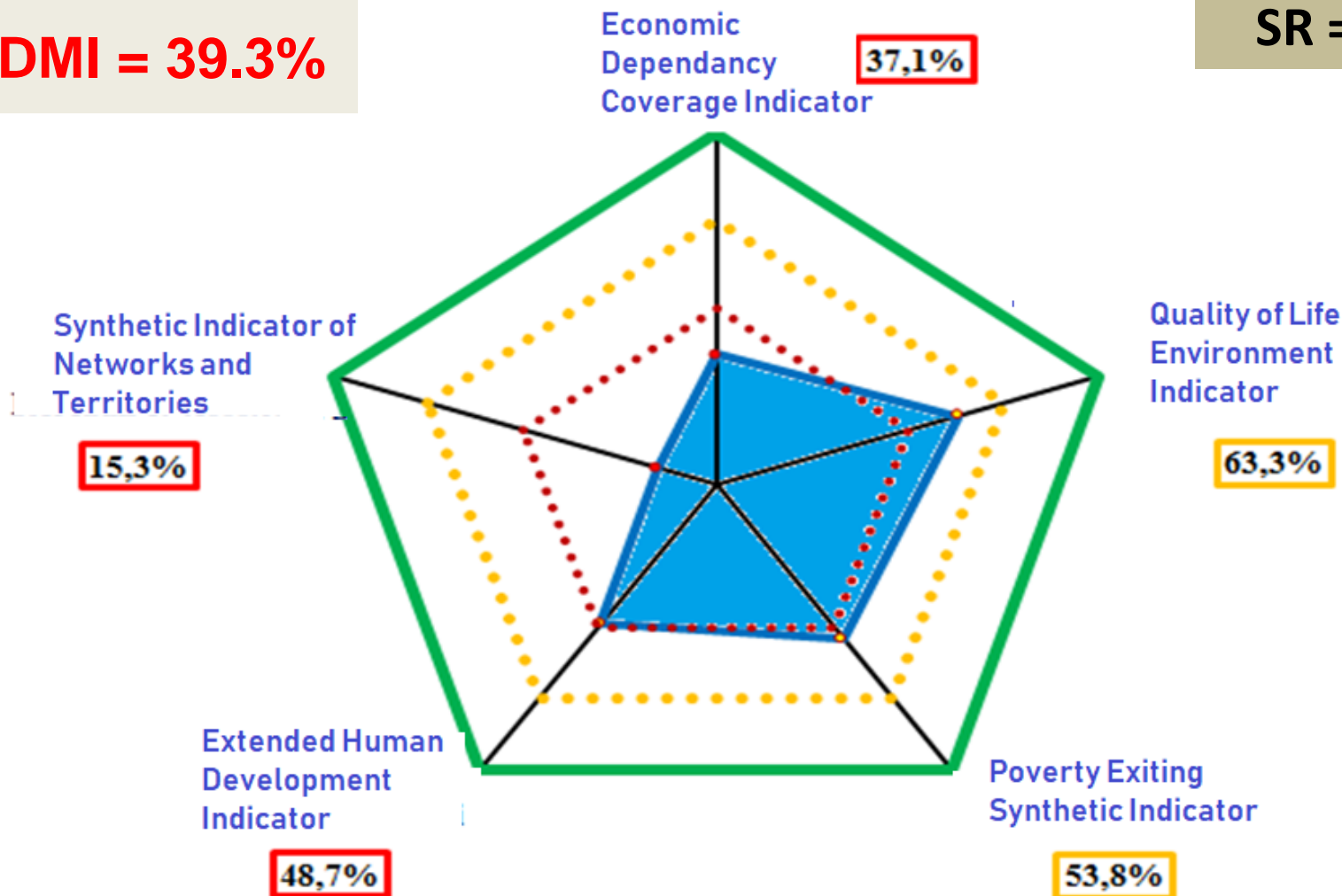


Migration index

Basic infrastructure index

DDMI = 39.3%

SR = 61%





DDMI BY REGIONS IN SENEGAL

Regions	EDCI	QLEI	PESI	EHDI	NTSI	DDMI	Rank
Saint Louis	100	56.0	56.1	63.6	19.7	52.4	1er
Dakar	21.1	63.8	71.5	76.3	45.4	50.6	2e
Diourbel	58.3	61.0	52.8	55.3	19.4	45.8	3e
Kaolack	76.8	57.0	38.0	63.7	17.9	45.3	4e
Louga	48.4	58.3	72.4	59.2	15.7	45.3	4ex
Thiès	26.5	65.3	58.7	64.4	21.6	42.7	6e
Kaffrine	57.2	58.0	38.0	48.6	14.3	38.8	7e
Ziguinchor	36.5	60.4	30.2	63.4	20.8	38.8	7ex
Tamba	66.2	59.0	23.2	50.5	16.7	37.7	9e
Kolda	42.9	61.8	32.7	48.0	15.3	36.4	10e
Matam	12.5	54.8	55.3	51.1	17.2	31.9	11e
Fatick	97.6	59.4	6.3	54.6	14.9	31.3	12e
Sédhiou	22.8	59.4	32.7	44.6	14.8	31.1	13e
Kédougou	23.1	55.2	23.2	51.4	10.7	27.7	14e



INVESTMENTS & ELASTICITIES CASE OF EHDI SENEGAL

Extended human
development indicator

Sub-dimension:
Education

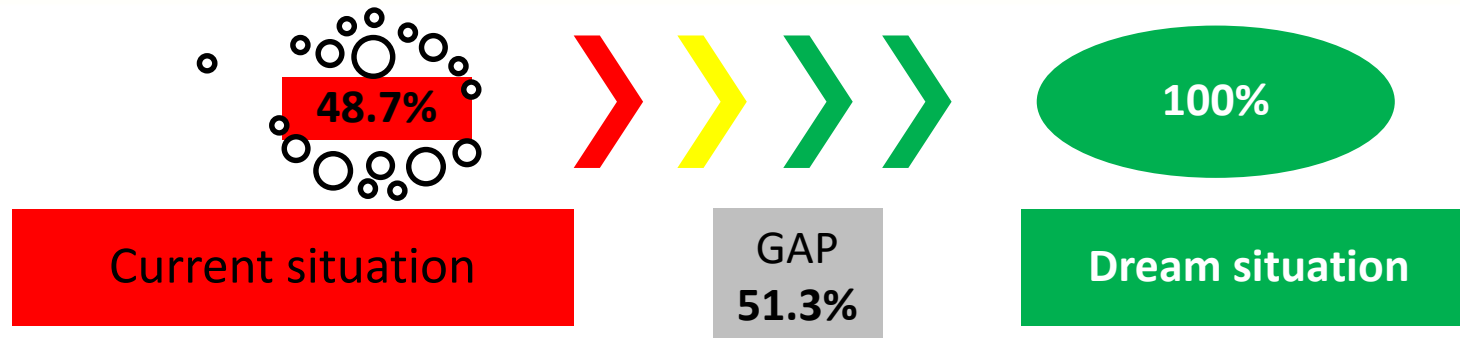
MSD & EDS

Elasticity

EDS	0.008
MSD	0.006

	Reference	Year 1	Year 2	Year 3	Year 4	Year 5
Investment (10 ⁶ CFA D)		2943.65	2943.65	2943.65	2943.65	2943.65
Total Investments		2943.65	5887.30	8830.95	11774.60	14718.25
MSD Index	0.36	0.37	0.38	0.39	0.40	0.41
EDS Index	0.50	0.52	0.54	0.55	0.57	0.59
EDUCATION INDEX	0.43	0.45	0.46	0.48	0.49	0.50

» » » GAP ANALYSIS: RECOMMENDATIONS AND INVESTMENTS



Recommandations

- ✓ Raise awareness and promote education for all. especially girls
- ✓ Reform education by identifying the real manpower needs of the economy
- ✓ Tailor the education system to the needs of the labor market
- ✓ Invest in the sector of general education but also and especially in vocational training



THANK YOU

