DEMOGRAPHIC DIVIDEND PERCEPTION AND OUTCOME MONITORING INDEX FOR NIGERIA: METHODS AND RESULTS

Olanrewaju Olaniyan[1]*, Akanni Lawanson[1], Noah Olasehinde[1], Oyeteju Odufuwa[1], Olabanji Awodumi[1], Temitope Olalude[1] and Andat Dasogot[2]

[1] Health Policy Training and Research Programme (HPTRP)
Department of Economics, University of Ibadan, Ibadan, Nigeria

[2] United Nations Population Fund, Nigeria

***Corresponding Author:** lanreolaniyan@yahoo.co.uk

Abstract

Nigeria is largely heterogenous with peculiar population dynamics at national and sub-national levels. Given the differences in governmental efforts to harness the Demographic Dividend (DD) in the country, monitoring its progress becomes imperative. To achieve this, the DD Monitoring Index (DDMI) was developed as a composite index, comprising of both the Perception Index (DDPI) and the Outcome Index (DDOI). The DDPI measures the perception of key stakeholders to the effort of government towards the attainment of the DD, while the DDOI uses standardized indicators of measurement to measure specific outcome indicators on DD activities. The unifying factor of the two indexes is that they both stem from the five (5) thematic pillars of the Nigerian DD Roadmap. Measured with five dimensions, 22 domains and 100 indicators for the DDPI; 96 indicators spread across 16 sub-domains and 24 domains for the DDOI, the findings showed disparities in perception and outcomes. While some perceive government as being productive, the outcome index reveals largely otherwise. In all, the combination of perception and outcome to compute DDMI provides a guide for policymakers to assess achievements obtained, measure progress and detect any deviations recorded in the implementation of Demographic Dividend activities in Nigeria.

Word count: 198
Keywords: Demographic Dividend, Domains, Dimensions, Outcome index, Perception index

Extended Abstract

Nigeria, like many other African countries is in the middle of demographic transition with the attendant large proportion of her citizens either children or young adults. This is the rationale for a comprehensive agenda to harness the potentials of these youth for the development of the country. The large proportion of children and youth creates a demographic window of opportunity that can translate into a virile Demographic Dividend (DD). In order to holistic harness the dividend, the African Union prepared a DD agenda to guide the activities of different countries in the continent (African Union Commission 2017). Nigeria had also followed suit by preparing her own agenda for harnessing the demographic dividend for the country. In order to ensure that the agenda is being implemented, there is the need to monitor progress towards the roadmap. In fact these are clear action points in both roadmaps. In addition, as part of the programming for the demographic dividend, the UNFPA WCARO (2019) identified as one of the main actions, the establishment of a regional observatory and national multisectoral observatories of the DD under the guidance of national statistical, planning and population agencies. This necessitates the need for a coherent Monitoring and Evaluation (M&E) framework.

The Nigerian DD Monitoring Index (DDMI) is uniquely computed to directly monitor the five thematic pillars of the country's roadmap. In doing this, we incorporate the indices into the AU Roadmap to provide a performance matrix to policy makers (AU, AfDB and ECA 2019). This will assist in identifying areas of strengths and areas for rigorous policy attention that will shape the performance of the DD. The robustness of this monitoring index will not only track the progress made towards creating and harnessing the DD, but also reinforce the country's efforts towards achieving the AU agenda 2063 and Agenda 2030 (SDGs).

The DDMI is a composite index comprising of both the Demographic Dividend Perception Index (DDPI) and the Demographic Dividend Outcome Index (DDOI). It seeks to consolidate the two existing DD monitoring indexes for Nigeria - Demographic Dividend Monitoring Index (DDMI) (Olaniyan et al, 2020) and Demographic Dividend Effort Index (DDEI) (NPC 2020). The DDPI measures the perception of key stakeholders to the effort of government towards the attainment of the DD, while the DDOI uses standardized indicators of measurement to measure specific outcome indicators on DD activities in the nation and sub-nationals. Simply put, the DDPI and DDOI are qualitative and quantitative in nature respectively. The unifying factor of the two indices is that they both stem from the pillars of the National DD Roadmap. The DDMI for Nigeria was developed to reflect the peculiarity of population dynamics and DD position of the country as contained in the DD Roadmap. The methodology adopted is mixed (qualitative and quantitative) in three computation phases – DDPI, DDOI and DDMI. These were constructed following the five steps below:

STEP I: Identifying the dimensions, which is the components of the DDMI. These dimensions are the thematic pillars of the DD Roadmap, which include health and wellbeing (pillar 1); education and skill development (pillar 2); employment and entrepreneurship (pillar 3); governance and youth participation (pillar 4); and practical evidence-building on DD (pillar 5).

STEP II: Identifying the domains, sub-domains and indicators. These are the investible areas that will lead to progress in the identified dimensions. While the DDOI has unique domains and subdomains for each dimension, the five policy levers identified as domains for each of the dimensions of the DDPI are policymaking, services and programs, advocacy, research and civil society. Hence, there were 22 domains and 100 indicators for the DDPI, while a total of 96 indicators spread across 16 sub-domains and 24 domains were used to compute the DDOI (Table 1). The selected indicators and data are validated through the National Transfer Account Global Network.

Table 1: Distribution of domains, sub-domains and indicators

S/N	Dimension	DDOI			DDPI	
		Domain	Sub-Domain	Indicators	Domain	Indicators
1	Health and Wellbeing	7	4	21	7	35
2	Education and Skill Development	3	7	20	3	15
3	Employment and Entrepreneurship	4	2	14	3	15
4	Governance and Youth Participation	5	3	26	4	20
5	Practical Evidence-Building on DD	5	-	9	5	25

	Total	**24**	**16**	**90**	**22**	**110**

STEP III: Data Requirement and Sources. This was where the data templates were developed followed by stakeholders meeting with about 85 experts in the DD Space in Nigeria. For the DDPI, a survey was conducted by administering questionnaires among relevant stakeholders spanning across its domains at the sub-national levels. State focal persons were then appointed for primary data collection in each state who later identified the respondents for all the five (5) dimensions. DDPI data were collected through questionnaire administration to experts in DD activities at national and sub-national levels working with Federal Government, State Government, Private Sector, NGOs/CSOs, Development Agencies, and Researchers. They were selected through 3-stage sampling technique: First was through a *clustered* sampling the country into 6 Geopolitical Zones; the second was a *purposive* sampling of 21 States and Federal Capital Territory (FCT); while *random* sampling of 1,218 experts in the relevant organizations was done at the third stage. There were eight (8) sets of questionnaires adapted from the Demographic Dividend Effort Index developed by Johns Hopkins Bloomberg School of Public Health in 2020 but largely amended and structured for country-context. Data for DDOI were sourced from both domestic and international databases for 2021/2022. These are official databases that are reliable, publicly available and easily accessible.

STEP IV: Obtaining the index for the various sub-domains, domains and dimension. Given that the collected data were measured differently for all indicators, as each one has its standard unit of measurement, they were transformed to a common unit for ease of analysis to obtain a unique index. All indicators were weighted and aggregated. The weights were assigned on the relative importance of each dimension, domain and indicator, given their peculiarity to the entity context, and closeness to the Agenda 2030 and 2063. All indicators were converted to proportions and each weighted score ranged from worst (0) to best (100). The sum of all the weights of the five dimensions of the DDOI and DDPI gives a total of 100 percent individually. The three indexes, which measures the progress that has been made in harnessing the dividend, were computed as the aggregation of indexes of sub-domains and domains using the normalized scores corresponding to each of the indicators.

STEP V: Designing the Dashboard. In the design of the dashboard, the index was classified into five levels of progress towards harnessing the demographic dividend following common standard of interpretation of index. Score of 80 -100 represent *optimal* progress while 61-80 and 41 – 60 represent good progress and average progress respectively. A score of 21-40 represent deficient progress while any score below 21 is critically deficient. The dashboard provides an at-a-glance visibility of progress and makes comparison easy as apparent in Table 2.

Table 2: Classification Criteria for the DD Monitoring Index

Index Score	Performance	Dashboard Colour
81 – 100	Optimal progress	
61 – 80	Good progress	
41 – 60	Average progress (Intervention needs to be scaled up)	
21 – 40	Deficient (Intervention required)	
0 – 20	Critically Deficient (Serious Intervention required)	

Demographic Dividend Outcome Index (DDOI):

The results indicate that based on the outcome index, Nigeria has only made a deficient progress with an index of 38.7. Despite this, the degree of progress made varies for each of the five dimensions. For example, biggest progress was made in the education and skill development dimension with an average progress index (43.6 percent). This is closely followed by governance and youth participation (40.6 percent), which are also average progresses. For health and wellbeing and employment and entrepreneurship pillar, progress is deficient with a score of 39.6 percent and 38.3 percent respectively. Practical evidence building pillar had the lowest index score of 10.6 percent, depicting a critically deficient performance where urgent attention is required. It therefore becomes evident that there is the need for more actions to have significant progress in harnessing the DD in Nigeria across all dimensions. This is summarised in radar charts of Figure 1.

Demographic Dividend Perception Index (DDPI):

The result of the DDPI reflects the perceived effort of the government on the five dimensions by experts in DD space. It was found that perception results for the various dimensions are better than the outcome results. The results further reveal that better progress had been made in the governance and youth participation dimension than any other DD pillar with an average progress index of 50.1 percent. This is closely followed by employment and entrepreneurship dimension also recording an average performance of 49.1 percent. For practical evidence building and education and skill development dimensions, average progress of 48.7 and 48.2 percent can be observed respectively. Health and wellbeing dimension had the lowest index score of 47.4 percent, depicting an average performance. A closer look at the radar charts in Figure 2 shows that the perception of the experts is that the interventions are required across all dimensions of the index.

Figure 1: DD Outcome Index - DDOI (38.7%)

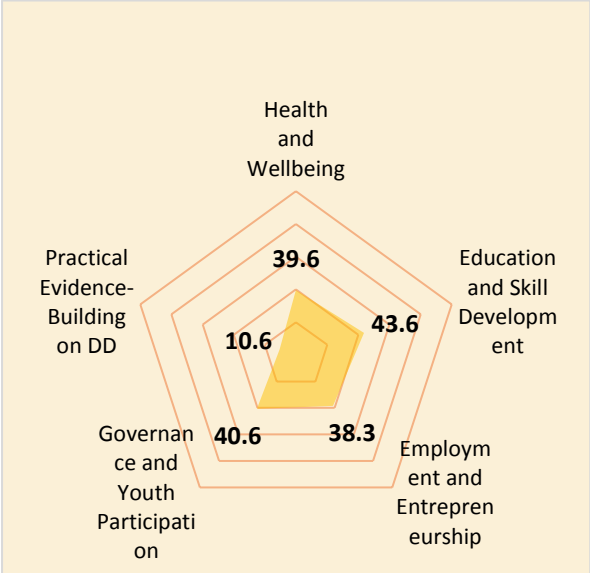
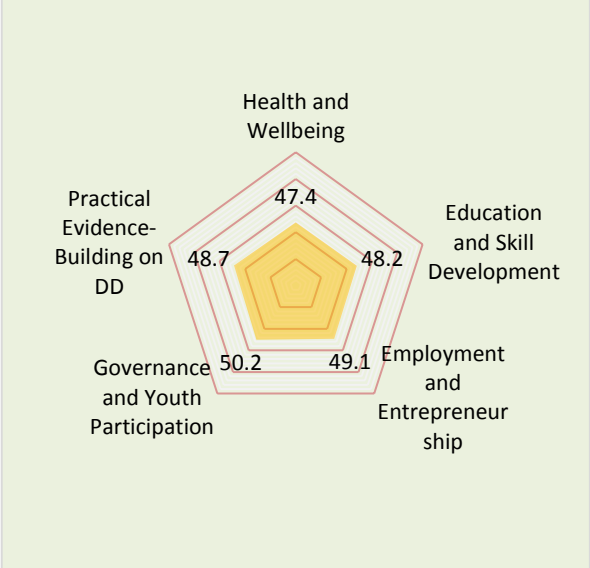


Figure 2: DD Perception Index - DDPI *(48.6%)*



Composite Demographic Dividend Monitoring Index (DDMI):

The DDOI and the DDPI reveals interesting results. It is however necessary to have the composite Demographic Dividend Monitoring Index (DDMI) that combines the two different indexes at the dimension level[1]. The Figure 3 indicates an average overall progress towards

[1] This is made plausible because both DDOI and DDPI has the same dimension corresponding to the DD pillar and they are also measured on the same scale of 0 – 100.

creating, harnessing and sustaining DD in Nigeria with an index of **43.7** percent. Education and Skill development outperformed other dimensions with an average progress index of 45.9 percent. Practical evidence building on DD activities performed worse with a deficient performance of 29.7 percent.

Figure 9: The Composite National Demographic Dividend Monitoring Index for Nigeria

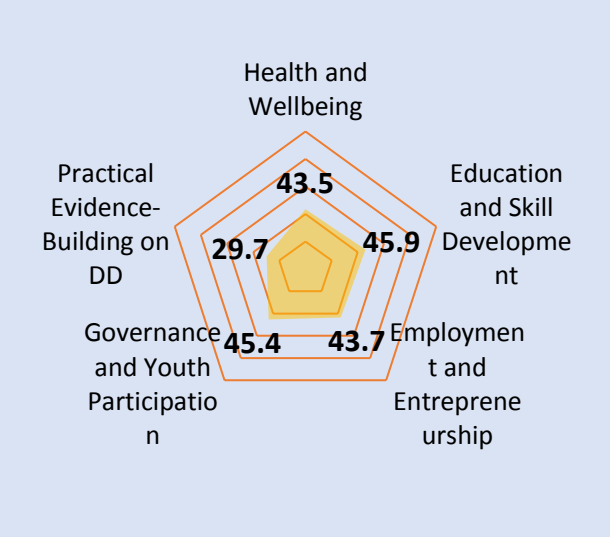


Table 3: Dashboard of the Results

Pillar	DDPI	DDOI	Composite DDMI
Health and Wellbeing	**Average Progress**	**Deficient**	**Average Progress**
Education and Skill Development	**Average Progress**	**Average Progress**	**Average Progress**
Employment and Entrepreneurship	**Average Progress**	**Deficient**	**Average Progress**
Governance and Youth Participation	**Average Progress**	**Average Progress**	**Average Progress**
Practical Evidence-Building on DD	**Average Progress**	**Critically Deficient**	**Deficient**
Aggregate Index	**Average Progress**	**Deficient**	**Average Progress**

Governance and youth participation, employment and entrepreneurship and health and well-being had an overall performance of 45.4, 43.7 and 43.5 percent, respectively indicating average progress contributions towards creating and harnessing DD activities in Nigeria. Table 3 shows the dashboard of the three results.

Conclusion

The findings of the study showed disparities in perception and outcomes. While some perceive government as being productive, the outcome index reveals the reverse and vice versa. In all, the combination of perception and outcome in the computation of the monitoring index provides a guide for policy makers to assess achievements obtained, measure progress and detect nay deviations recorded in the implementation of Demographic Dividend activities in Nigeria. Furthermore, it will ensure policy continuation and provide a better platform for a deep-seated understanding of the driving force for the first and second demographic dividends determine the appropriate policy prescriptions.

Reference

African Union Commission. (2017). *AU Roadmap on Harnessing the Demographic Dividend through Investments in Youth. In response to AU Assembly Decision (Assembly/AU/Dec.601 (XXVI) on the 2017 theme of the year*. http://wcaro.unfpa.org/sites/default/files/pub-pdf/AU%202017%20DD%20ROADMAP%20Final%20-%20EN.pdf.

AU, AfDB and ECA (African Union, African Development Bank and Economic Commission for Africa) (2019). Africa Regional Integration Index (ARII): Methodological Note, The African Union, and the United Nations Economic Commission for Africa. https://www.oecd-

ilibrary.org/docserver/533411815016.pdf?expires=1599517630&id=id&accname=guest&checksum=5D89D017A8537F5661FF2C259ADF21CA

NPC (National Population Commission), 2020. Demographic Dividend Effort Index Report: Nigeria 2020

Olaniyan, O., Lawanson, A., Olasehinde, N., Odufuwa, O.T. and Awodumi, O. 2020. *Demographic Dividend Monitoring Index for Nigeria: 2016 Baseline Report*. HPTRP, University of Ibadan, March 2022

UNFPA WCARO (UNFPA Regional Office for West and Central Africa), 2019. Programming the Demographic Dividend: from Theory to Experience. Dakar: SWEDD Project