Child's well-being and parents' employment status in Nigeria

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Abstract: The sustainable development goals have been shown to be interdependent. Infants and children are important target groups for enhancing the future prospects of any society through improved welfare. It is noted that child's development within the home could be hampered when the family is poor and devoid of decent employment, so employed parents' income is an important mean to secure the child's well-being. However, the effects of parents' work on the child have been found to be ambiguous. The current study examined the relationship between the child's well-being and parents' employment status in Nigeria with the use of multiple regression technique. The results suggest that employment of each of the parents dampened the child's health, while the earnings from their wages and salary enhanced the child's well-being. To address the parents' work and childcare conflicts and maximise the benefits of the parents' earning, government should generate better quality jobs, proffer family-friendly policies which are adequate and capable of helping women to achieve work-family balance, and also encourage both public and private employers of labour to do so.

Keywords: sustainable; development; goals; parents' employment; child wellbeing; Nigeria; multiple regression; dampen; enhance.

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1 Introduction

The United Nations 2030 Agenda for Sustainable Development was adopted in Nigeria on the suspension of the programs on implementation of the Millennium Development Goals (MDGs) in 2015. This was done in collaboration with other 193 Member States of the United Nations. The program's agenda has universal applicability in a set of 17

integrated and indivisible goals which were broken down to measurable targets and indicators (United Nations Department of Public Information). These were seen as means of affecting the life of all people through alleviation from poverty, making the planet healthy for future generations, and also building an inclusive and a peaceful society. The program, which emphasises country-level interpretation and application of the goals is a mechanism to transform the world by looking after the welfare of all within a period of fifteen years (United Nations, 2013).

The Sustainable Development program, in particular offers a more holistic approach to child development than the previous developmental programs. This is because enhancing child well-being is crucial to promoting strong and inclusive growth. It is a recognised fact in the Sustainable Development Goals (SDGs) that infants and children are important target groups for enhancing the future prospects of our societies through improved children welfare. This is because investment in child constitutes a fundamental means of enhancing inter-generational prosperity through poverty eradication, and pursuance of other goals and targets thereby strengthening the child's ability to reach their productive potential and therefore contributing their quota to the families and societies. Therefore, as noted by 2013 UNICEF Executive Director, sustainable development starts and ends with safe, healthy and well-educated children, and so child well-being must therefore be an integral element of any policy strategy that is targeted at promoting inclusive growth.

The child's well-being could be assessed through two dimensions. One is the economic and social status of the parents of the children. This relates to the income and earnings of households, housing conditions and the quality of the environment where the families live. Two, is child-centred well-being factors, which include their own health-status, educational and social outcomes, as well as own subjective perceptions of the quality of life (OECD, 2015). The child's well-being could be hindered in many ways when families live in poverty because there would not be enough resources to take care of basic needs such as feeding, clothing, housing, schooling, security, etc. The children in poor families therefore suffer a host of developmental setbacks than the ones from more affluent homes. Duncan et al. (2011) asserted that poor families as a result of lack of resources find it difficult to invest in high-quality childcare, give enriched learning experiences to their children, and struggle economically to cope with substandard housing, and unsafe neighbourhoods. Children's health and paediatric practice could also greatly be affected by the level of poverty as asserted by Ahmed (2007).

Children' development encompasses a range of occurrences from birth and this is strongly affected by living arrangements and the socioeconomic status of their parents. In particular, maternal depression and nutritional deficiencies in children is capable of affecting the learning and retention rate of the children in later life. These in the long run can affect the adult health thereby contributing substantially to the societal poverty and health challenges (Galler et al., 2010; Najman et al., 2009; Walker et al., 2011).

Attention to children's developmental needs has to start in early life and should be continuous throughout childhood because of the enormous returns from investing in children's health and education. Heckman et al. (2010) showed that for each dollar invested in children at age 4 in the USA, there was a net return that ranged from 7 to 12 USD per person. Moreover, these benefits were especially large for children from disadvantaged family background.

Investment in children thus offers a win-win opportunity for children, their parents and society as a whole because the pool of skilled workforce is increased thereby increasing productivity and earnings.

It was maintained in the report of OECD (2016) that when parents are jobless, children in the home stand the risk of being impoverished. They also showed that one in ten children lived in a jobless household on average across the OECD in 2012. So, it has greatly been shown that a way of alleviating poverty in home is when the parents are gainfully employed. When employed, family income is boosted and children's development and well-being are enhanced. OECD in 2018 reported that as a way of protecting children from poverty, stable and full-time employment of parents is paramount. The report affirmed that poverty rate in household would reduce from 10% to less than 6% if all parents from poor families were gainfully employed.

Heinrich (2014) however, noted that the effects of parents' (especially mothers') work on the children could be ambiguous. This is because of the paradoxical nature of mothers' roles when she is formally employed. On the one hand, when parents work and earn income, the earned income can be used to enhance their children's well-being and development, while on the other hand the affection and parental bond with their children can be impaired when parents are engaged on job especially when it involves too long hours outside the home or evening and night shifts.

Corroborating this, Ering et al. (2014) noted that there are a lot of mothers whose involvement in formal employment and the demands of such has greatly harmed the developmental process of their children. So also, stressed up working parents could hamper their parenting skills, and thereby affect children's wellbeing. He therefore suggested that the benefits of parents working could be maximised and the detriments minimised when workplace flexibility is expanded.

The nature of parents' work matter, and the parents that work outside the formal office have more of time to spend with their children than the ones who are engaged in formal office work. What the children of office workers suffer in terms of the loss of bond to parents, lack of nutritious food, and problem of safety of the children is very difficult to quantify. As soon as an office worker resumes work after the maternity leave, the little kid is kept in the day care and that starts with the problem of breast milk extraction by the mother. Most often, day care children are left unattended to; pampers left unchanged, kids left unfed and crying for a long time, and even are drugged at times to force them to sleep. There are instances when kids are left with nanny or house keeper while their busy parents would not set their eyes on them from the beginning of the week until week end, particularly when both parents are engaged in office work and they have to leave very early before the child wakes and return very late when the child would have slept. The child only relates with the nanny during the day, and the child through this can learn and grow with strange behaviours and characters in the family. Also, because the major part of the parents' time is spent outside the home, there is no time to prepare nutritious food for the children. The child lives on snacks and fast foods. This can pose serious health challenges to him.

The safety of the child is also at stake when parents are formally employed. There have been cases of kids been kidnapped to undiscovered places by hired commercial 'okada' riders who were engaged to take them to school and bring them home from school after closing. All these risks are suffered because the parents' time was engaged in office work and no sufficient time to take care of the kids.

Striking a good balance between work and children care responsibilities is not an easy combination with many parents. It is being advocated that a way to reducing child poverty and enhancing child well-being is by making it possible and easier for parents to balance their work and family life so as to sharpen parental ability to provide income, care and education to their children.

Mothers in particular play multiple and combined roles in the home to ensure the wellbeing and development of the child. In most societies around the world, infants and children' care lie primarily with the women by custom (Waldfogel, 2001), and they also play invaluable roles in complementing or even being the sole generator of the family' income. Because mothers have to allocate their time between these two pressing and crucial roles, there may be conflict in the performance of the roles and this has serious and important implications for the welfare of the child. It has therefore been an issue in developing countries that mothers who are engaged on formal jobs may have to supplement or replace breastfeeding of their children with artificial milk and non-nutritious meals for lack of time with them. It is noted that the market substitutes of services to supplement child nutrition may be poor and even unaffordable by poor parents (Leslie, 1989; Glick and Sahn, 2000; Lamontagne et al., 1998; Glick, 2002).

Apart from the negative effect on children's nutritional status, mothers' employment most likely can affect the schooling of the children or the schooling of the older siblings negatively, particularly if they are girls and if they have to assist in the role of caregiver.

Although the effects of mothers' work on child's nutrition have mostly been documented in the literature, the role of paternal employment in the wellbeing consideration of the child also is a crucial one. Traditionally at our side of the world, men are usually saddled with the responsibility of being the head of the home and family breadwinner. So, generally, men's labour force supply is significantly higher than that of women in most societies in the developing economies. For the fact that men are more involved in the labour force participation than women, they have less of time at home and so less involvement in direct childcare and nurturing (Evans, 1995; Anandalakshmy, 1994; Letablier, 2009; Glick, 2002).

Fathers who are formally employed would therefore affect their children's welfare through their influence on the time allocation of the other spouse to childcare, and through their income earnings rather than through direct participation in the care and nurturing of young children. An increase in father's work hours or earnings is expected to reduce the mother's labour force participation or hours of work and consequently increase her time allocation to childcare. This is as confirmed by some studies (e.g. Ilahi, 2000; Ilahi and Grimard, 2000). However, evidences abound largely from the developed nations that when fathers participate in child-raising, children largely benefit intellectually, socially, and emotionally (Ishii-Kuntz, 1995; UNDP, 1995; Hoffman, 1989).

The changing nature of fathers' work in wage employment has made men to be subject to unemployment palaver and this has affected both the household income and the cohesion in the family. When unemployed fathers migrate (either rural-urban or internationally), the well-being of their children can be positively impacted by the remittances from the absent fathers or the family ties can be financially as well as emotionally weaken by separation in the absence of adequate remittances.

Based on the premises above, this study is consequently designed to investigate:

- the effect of each parent's labour market involvement on the child's well-being,
- the effect of joint labour market involvement of the parents on the child's wellbeing, and
- the effect of father's labour market supply on mother's labour market involvement.

Following Section 1 which contains the introduction and problem statement; Section 2 discusses the literature review; Section 3 contains the methodology employed; Section 4 presents the result of the analysis; and Section 5, the summary and recommendation.

2 Literature review

Becker (1981) introduced the notion of household production, basing his theoretical models on the 'New Household Economics'. Through a 'nutrition production function' he identified the determinants of the child's nutritional status as a set of health 'inputs' which include nutrient intake, child breastfeeding, preventative and curative medical care, and the time of the mother in care-related activities (Glick, 2002). With a higher consumption of good such as food and medical care which will be made available with higher earnings from mother's employment, the nutritional status of the child is raised. Conversely, the nutritional status of the child will be reduced with less amount and/or quality of time devoted to health-related activities (Glick, 2002). Becker (1981) and Becker and Tomes (1986) in their modelling of household production as a function of human capital also proposed that parents allocate their available time to employment and rearing of children in order to maximise their utilities. The former decision positively affects their current standard of living, while the latter decision positively affects their future standard of living through their children's incomes.

The empirical study on how parents' work is related to child's well-being has been very scanty, particularly in developing countries, and there has not been consensus in the conclusions of the few ones. It has however been shown that parents' income earning gives children's access to good and nutritious food, with quality education and better healthcare because much of parents' income is spent on caring for their children. This was proved by Letablier (2009) who estimated that about 20–30% of household budgets is expended on children. If a prompt attention is not given to the care and development of child early in life, it can cause stunting which is capable of causing permanent damage to a child's brain and body development. The cumulative effect of all these is capable of causing GDP losses to countries and limiting the pace of national development. This was as evidenced in India where it was estimated that the productivity loss caused by stunting of children are more than 10% of the nation's lifetime earnings, and that GDP loss to undernutrition was between 3% and 4% (Shekar et al., 2006). The same way, Becker and Tomes (1986) argued that mothers' time is a major and an important part of child's care.

In recognition of the importance of parent's employment on child's performance, Walker et al. (2011) noted that things have changed from the way it was in the 1960s and even 40 years later when only two-thirds and one-third of children's parent respectively stayed at home in the USA without employment. It is now a popular public opinion with majority of the USA that both husbands and wives should contribute to family income

particularly among low-income families, and also majority disagree with the notion of women returning to 'traditional roles' (Pew Research Centre, 2009). In 2011, U.S. Bureau of Labour Statistics showed that 87.2% of US families who have children had employed parents, and that 58.5% of the families had both parents worked. In fact, women's participation in the workforce has steadily been on increase with many becoming the main breadwinners. The reason for this is to support their family.

Hamad and Rehkopf (2016) estimated the impacts of income through Earned Income Tax Credit policy on child development in the USA during 1986–2000, exploring instrumental variable approach. They found that higher Earned Income Tax Credit benefits were associated with higher income and that the two significantly improve the child's development.

However, Heinrich (2014) noted that in the homes where parents are not well inclined to take leave from work, reduce the hour of work, or well able to provide the resources needed for their children's wellbeing, the children are more likely to be negatively affected when their parents are formally employed. He then suggested that federal tax provisions should be simplified as a way of motivating employers to offer better working conditions which can enhance parents' job quality and also help balance parents' work demand with the needs of their children' care.

Although what is well debated and established in literature is the depression and several other things that are suffered when there is job loss in the family, Powdthavee and Vernoit (2013) has however been able to explain and contest what children in a home where there is job loss can gain in term of psychological well-being. They empirically explored a unique sample of national longitudinal data of British youths between the age of 11 and 15 years and demonstrated that the timing of the parental unemployment matter in determining the effect on children's happiness and wellbeing. Their analysis suggested that while parental job loss positively impacted young children's overall happiness, but the older children were negatively or insignificantly impacted. In the same vein, Pieters and Rawlings (2016) explored panel data which covered the period of 1997–2004 on China to study the causal effect of maternal and paternal unemployment on their child's health status. As premised, the study confirmed that children's health deteriorates when fathers lose job, while their health improves when mothers lose job. This was ascribed to the traditional gender roles which cause negative health effect because of suffering from lost higher income from the father but which increase available time for childcare by the mother.

In Nigeria, very few studies have been done along this line. Among these, Ering et al. (2014) examined how mother's employment demands affected the child's development. The study sampled 120 respondents from Ikot Esu Community in Calabar. The responses derived from them were analysed through the use of chi-squared statistical technique. The findings from the study however showed that mother's employment demands seemingly disconnect from child's behavioural pattern and the child's development. The study recommended that the government should extend the leave time period grant to nursing mothers, and also that there should be gender sensitivity so that both male and female parents could contribute to the responsibility of child rearing.

Fagbeminiyi (2011) conducted a survey which was analysed through the use of Analysis of Variance (ANOVA) to test the hypotheses on the importance of parents' role on early childhood education of their children in Nigeria. The study affirms the significant influence of parental involvement through emotional care and support on childhood education generally and their academic performance in general.

Okonkwo et al. (2019) investigated the health implications of work-to-family conflict on under-five year children whose mothers are career mothers. The study was based on multiple role stress theory which assumes that when an individual in a home engages in more than a role responsibility, such a one may be exposed to stress. They explored a cross-sectional survey which was carried out among 129 career mothers who were between 23 and 48 years, and who also attended postnatal clinic in a Teaching Hospital in Enugu, Nigeria. Their study showed that most of the surveyed career women (92.2%) worked between 30 to 60 hours in a week and they suffered high level of work-to family conflict. Also, 46% of the surveyed career women reported leaving the caring of their children to domestic servant thereby interfering with exclusive breastfeeding of their babies.

In addition to the above, the incidence of child labour is considered an issue in parents' employment and child's well-being relationship in Nigeria. The menace of child labour is seen as a result of fallout of household economies. So, Osiruemu (2007) based his study on the premise that poverty is a major factor contributing to the growth and severity of child labour. Using structured interviews on sampled 210 children in Benin City, he reflected that urban poverty compelled poor parents to send children of school age to work to boost family income.

Ajayi et al. (2017) also investigated the causes and effects of children's involvement in child's labour activities. They sought the opinion of 130 working children who were between the ages of 5 and 14 years about the likely causes of their working and its impact on schooling. Quantitative technique was employed in the analysis, and the findings from the study revealed that there are significant relationships between parents' educational attainment, parent's occupation and the practice of child labour. The study showed further that poor school performance was due to adverse effect of child labour.

This current research study is necessitated, given the place of child well-being strategy in inclusive growth initiative, and the importance of parents' involvement in labour market which is capable of enhancing the economic growth pace. Although this topic has received some attention in developed countries and some other developing countries, empirical literature on such subject matter on Nigerian economy has been very scanty and uncommon; this constitutes the motivation for this indispensable research.

3 Research methodology

The basic empirical approach of this study is to regress the child's wellbeing in Nigeria on parents' employment status, making use of secondary data. To be able to do this comprehensively, the variables of the child's wellbeing used were the health and education of the child. Child's health was measured by data on under-5 mortality rate, while child's education was measured using the adjusted net primary school enrolment rate. In measuring the parents' employment status, data on male and female wage and salaried workers, male and female unemployment rate, and male and female labour market participation rate in Nigeria were variously used interchangeably. Other control variables of interest include economic growth rate, population growth rate, household consumption, and dependency ratio.

Furthermore, the implication of the father's labour force involvements on the labour force participation decision of the mother was also determined.

Time series data that span the period of 1991 to 2017 were extracted from GlobalEconomy.com (WDI) on the variables except the data on adjusted net primary school enrolment rate which was sourced from UNESCO Institute for Statistics global databases, 2018, covering the period of 2000 to 2016.

Stationarity test was performed on the data with the use of Augumentad Dickey Fuller test (ADF) to determine the order of integration of the data, while cointegration test to determine the long run relationship among the variables was based on Johansen system. The technique of estimation used was the Ordinary Least Square (OLS). This is appropriate because the response variables are continuous and their reaction to the explanatory variables will be well estimated by a linear regression model (Gujarati, 2007).

In the ordinary least squares (OLS) regression models, under-5 mortality rate and adjusted net primary school enrolment rate were regressed in turn on the father's employment rate and also in turn on the mother's employment rate variables and some control variables. Also, female labour participation rate was regressed on the father's employment rate and some control variables.

The basic empirical model used in this paper is thus specified as:

$$CHE = f(EMP, GDPGR, POPGR, DEPR) \quad (1)$$

where CHE is the child wellbeing variables (under-5 mortality rate and the adjusted net primary school enrolment rate), EMP is father's and mother's employment status variables, GDPGR is economic growth rate, POPGR is population growth rate, DEPR is dependency ratio.

$$\text{Explicitly, } CHE = \beta_0 + \beta_1 EMP + \beta_2 GDPGR + \beta_3 POPGR + \beta_4 DEPR + U \quad (2)$$

By apriori expectation, a higher employment status of the father would all things being equal reduce the child mortality rate and/ or increase the rate of enrolment of the child in school. In this case, the improvement in the child's health status could be achieved either directly through the provision of nutritious food that is made available to the child from the father's earning or the father's participation in the labour market that has reduced the time allocation of the mother to labour market, thereby increasing her time allocation to child's care.

Conversely, an increased earning when the mother is employed would likely improve the well-being of the child by decreasing the child's mortality rate or dampen the health of the child through the loss in child caring time.

So, the sign of β_1 would be determined by whatever case that is being considered.

$\beta_2>1$: A higher economic growth rate would boost the child's well being by reducing the mortality rate and increasing the school enrolment rate.

$\beta_3<1$: A higher population growth rate would tend to dampen the child's wellbeing by increasing the child's mortality rate and reducing the school enrolment rate.

$\beta_4<1$: A higher dependency ratio would also tend to dampen the child's wellbeing by increasing the rate of child mortality and also reduce the rate of school enrolment.

4 Presentation of empirical result

4.1 Unit root and cointegration result

As shown on Table 1, the unit root test on the variables shows that the variables are combinations of I(0), I(1) and I(2) series. Variables of under-5 mortality rate (CMR), Female wages and salaried workers (FSW), Female unemployment rate (FUNP), Male wages and salaried workers (MSW), Economic growth rate (GDPGR), Population growth rate (POPGR), Primary enrolment rate (PENR), and Dependency ratio (DEPR) were stationery at level, Male labour participation rate (MLP) and Male unemployment rate (MUNP) were stationery after first differencing while Female labour participation rate (FLP) became stationery after second differencing.

Table 1 Augmented Dickey-Fuller (ADF) unit root test results

Variables	*P-value*	*ADF test statistics with*		*Critical-value at 1%*		*Order of integration*
		Constant	*Constant & trend*	*Constant*	*Constant & trend*	
CMR	0.0129	–3.54	–3.64	–15.50	–4.23	I(0)
FLP	0.0008	–4.83	–4.88	–2.99	–3.61	I(2)
FSW	0.0198	–1.26	4.18	–2.99	–3.66	I(0)
FUNP	0.0120	–3.64	–4.10	–2.99	–3.60	I(0)
MLP	0.0272	–3.28	–3.59	–2.99	–3.60	I(1)
MSW	0.0511	–0.53	–3.65	–2.98	–3.66	I(0)
MUNP	0.0817	–2.74	–2.77	–2.99	–3.60	I(1)
GDPGR	0.0007	–4.62	–3.62	–5.57	–4.23	I(0)
DEPR	0.0006	–4.74	–3.65	–6.54	–4.27	I(0)
POPGR	0.0071	–3.91	–2.71	–2.99	–3.62	I(0)
PENR	0.0331	–3.19	–3.08	–2.99	–3.61	I(0)

The models on the different relationships show that there are not less than 1 cointegrating relations in each case as reflected in the comparison between the trace statistics and the critical values. The exhibition of robust cointegrating relationships among the variables of the models implies that there exists causality among the variables in at least one direction.

A critical look at Tables 2a(i) to 2a(iv) shows that between 86% and 97% of variation in child's health (CMR) was jointly explained by the different explanatory variables in each of the cases, and that the model has goodness of fit. These are as adjudged by the coefficient of multiple determinations (R-squared) and the F-statistic. In the case of unemployment rate of the mother (FUNP), child's mortality rate was significantly and negatively influenced. A unit change of increase in unemployment rate resulted in about 1807% reduction in child's mortality rate. Also, with a unit increase in the rate of mothers' engagement in wages and salaried work (FWS), the rate of child's mortality rate was significantly reduced by about 1588% during the study period.

Following the same pattern, father's unemployment rate (MUNP) significantly and negatively affected the child's mortality rate with a unit increase influencing a reduction of about 2418%. Also, as the case with mother, the engagement of father in wages and salaried work resulted in reduction in child's mortality rate with a magnitude which is the same with the effect of unemployment. This is shown to be significant and at about 2416%.

Table 2 Ordinary Least Square (OLS) results

a(i): Dependent Variable – CMR				
Explanatory variables	*Coefficient B*	*Standard error*	*t-Value*	*Prob*
FUNP	–18.07438	2.071775	–8.724107	0.0000
GDPGR	–0.453056	0.268496	–1.687384	0.1050
POPGR	–423.6868	23.75892	–17.83274	0.0000
R-squared	0.955719			
Adjusted *R*-squared	0.949944			
F-statistic	165.4717			
Prob(*F*-statistic)	0.000000			
a(ii): Dependent Variable – CMR				
Explanatory variables	*Coefficient B*	*Standard error*	*t-Value*	*Prob*
FWS	–15.88651	7.424388	–2.139773	0.0432
HHC	–0.849562	0.395332	–2.148982	0.0424
POPGR	–273.6585	104.4825	–2.619179	0.0153
R-squared	0.881053			
Adjusted *R*-squared	0.865538			
F-statistic	56.78768			
Prob(*F*-statistic)	0.000000			
a(iii): Dependent Variable – CMR				
Explanatory variables	*Coefficient B*	*Standard error*	*t-Value*	*Prob*
MUNP	–24.18085	3.267310	–7.400841	0.0000
GDPGR	–0.544200	0.273687	–1.988405	0.0593
HHC	–0.378294	0.246183	–1.536637	0.1386
POPGR	–464.1848	23.02427	–20.16067	0.0000
R-squared	0.959208			
Adjusted *R*-squared	0.951791			
F-statistic	129.3303			
Prob(*F*-statistic)	0.000000			
a(iv): Dependent Variable – CMR				
Explanatory variables	*Coefficient B*	*Standard error*	*t-Value*	*Prob*
MSW	–24.16307	2.332148	–10.36086	0.0000
GDPGR	0.533613	0.204232	2.612781	0.0159
HHC	–0.188132	0.195264	–0.963474	0.3458
POPGR	113.3093	60.22940	1.881295	0.0732
R-squared	0.975788			
Adjusted *R*-squared	0.971386			
F-statistic	221.6642			
Prob(*F*-statistic)	0.000000			

Table 2 Ordinary Least Square (OLS) results (continued)

b(i): Dependent Variable – APENR				
Explanatory variables	*Coefficient B*	*Standard error*	*t-Value*	*Prob*
FUNP	–1.096885	0.295216	–3.715533	0.0026
GDPGR	0.065396	0.030789	2.124036	0.0534
POP	0.116869	0.012582	9.288683	0.0000
R-squared	0.869741			
Adjusted *R*-squared	0.839681			
F-statistic	28.93365			
Prob(*F*-statistic)	0.000005			
b(ii): Dependent Variable – APENR				
Explanatory variables	*Coefficient B*	*Standard error*	*t-Value*	*Prob*
FWS	1.807016	0.325588	5.550012	0.0001
GDPGR	0.046040	0.024645	1.868177	0.0844
POP	0.049230	0.012046	4.086702	0.0013
R-squared	0.920287			
Adjusted *R*-squared	0.901892			
F-statistic	50.02859			
Prob(*F*-statistic)	0.000000			
b(iii): Dependent Variable – APENR				
Explanatory variables	*Coefficient B*	*Standard error*	*t-Value*	*Prob*
MUNP	–1.772738	0.315189	–5.624375	0.0001
GDPGR	0.059292	0.023949	2.475813	0.0278
POP	0.119739	0.009680	12.36922	0.0000
R-squared	0.921771			
Adjusted *R*-squared	0.903719			
F-statistic	51.05986			
Prob(*F*-statistic)	0.000000			
b(iv): Dependent Variable – APENR				
Explanatory variables	*Coefficient B*	*Standard error*	*t-Value*	*Prob*
MSW	1.705632	0.265053	6.435052	0.0000
GDPGR	0.035305	0.022511	1.568354	0.1408
POP	–0.013505	0.018634	–0.724758	0.4814
R-squared	0.935827			
Adjusted *R*-squared	0.921018			
F-statistic	63.19289			
Prob(*F*-statistic)	0.000000			

Table 2 Ordinary Least Square (OLS) results (continued)

c(i): Dependent Variable – CMR				
Explanatory variables	*Coefficient B*	*Standard error*	*t-Value*	*Prob*
TUNP	–12.40301	1.871976	–6.625625	0.0000
GDPGR	–0.418218	0.191266	–2.186574	0.0477
DEPR	–33.56347	1.834978	–18.29094	0.0000
R-squared	0.970236			
Adjusted *R*-squared	0.963368			
F-statistic	141.2585			
Prob(*F*-statistic)	0.000000			
c(ii): Dependent Variable – APENR				
Explanatory variables	*Coefficient B*	*Standard error*	*t-Value*	*Prob*
TUNP	0.037419	0.314959	0.118806	0.9072
GDPGR	0.092280	0.032180	2.867581	0.0132
DEPR	2.835451	0.308734	9.184135	0.0000
R-squared	0.866702			
Adjusted *R*-squared	0.835941			
F-statistic	28.17529			
Prob(*F*-statistic)	0.000006			
d(i): Dependent Variable – FWS				
Explanatory variables	*Coefficient B*	*Standard error*	*t-Value*	*Prob*
MSW	1.071464	0.074551	14.37213	0.0000
PENR	0.007772	0.003964	1.960693	0.0627
CMR	0.027873	0.003791	7.352625	0.0000
R-squared	0.985482			
Adjusted *R*-squared	0.983502			
F-statistic	497.7717			
Prob(*F*-statistic)	0.000000			
d(ii): Dependent Variable – FLP				
Explanatory variables	*Coefficient B*	*Standard error*	*t-Value*	*Prob*
MLP	–0.010442	0.239420	–0.043613	0.9656
MSW	–0.565565	0.168297	–3.360524	0.0030
CMR	–0.057708	0.012306	–4.689527	0.0001
PENR	–0.034343	0.008892	–3.862337	0.0009
R-squared	0.945982			
Adjusted *R*-squared	0.935693			
F-statistic	91.93959			
Prob(*F*-statistic)	0.000000			

As regards the control variables, the variable of population growth rate (POPGR) was shown to be significant in each of the models for the child's health and parent's employment status relationship.

Tables 2b(i) to 2b(iv) depict the relationship between the variables of education of the child and employment status of the parents. It is shown that between 84% and 92% of variation in child's education (APENR) was jointly explained by the different explanatory variables in each of the cases and that the model has goodness of fit. The coefficient of the models' multiple determinations (R-squared) and the F-statistic attested to these. All the explanatory variables were significant with the exception of GDPGR and POP in the case of male wages and salaried workers. The result as indicated on the table shows an inverse relationship between the child's school enrolment rate and the mother's and father's unemployment rate according to the appriori expectation. So also, the relationship between the rate at which the mother and the father were engaged in wages and salaried work with the rate of the child's school enrolment were shown to be positive.

The magnitude of the coefficient of our variables of interest indicates that a unit increase in the rate of unemployment of mothers (FUNP) and of fathers (MUNP) reduced the rate of school enrolment of the child by about 109% and 180% respectively during the study period. Conversely, a unit increase in the rate of mothers' and fathers' involvement in wages and salaried works increased the rate of child school enrolment by about 177% and 170 % respectively.

An analysis of the effects of the variable of total national employment on the wellbeing of the child were considered, and this indicated that 83% and 96% respectively of the variation in health and education of the child was explained by the included explanatory variables. Again, the F-statistics indicated that the model has goodness of fit, and the probability values show that all the included variables in health model are significant. The results of the analysis show that a unit increase in total national unemployment rate induced about 1240% reduction in the health status of the child, but funnily about 3.7% increase in the school enrolment of the child insignificant (Tables 2c(i) and 2c(ii)).

The analysis further considered the likely effect of the fathers' labour market involvement on the mothers' labour market participation decision. The models on these equally show goodness of fit, and that about 93% to 98% variation in mothers' decision for labour market participation was explained by fathers' participation in labour market and engagement in wages and salaried work. The results suggest that a unit increase in the rate of engagement of the fathers in wages and salaried work induced about 107% increase in the rate of the mothers' engagement in the same (Table 2d(i)).

4.2 Implications of the findings

Generally, the results show that an increased employment rate of each of the parents dampened the health of the child significantly, while the increased rate of engagement of each of them in wages and salaried work in particular enhanced the health status of the child during the study period.

The dampening of the child's health as a result of increased employment rate of each of the parents could be explained in term of what the child suffers in terms of missed parental bonds and/or in term of the quality and the nature of the employment. Contrarily, the enhancement of the child's health with increased rate of engagement of

each of the parents in wages and salaried work could be explained in term of what the child gains from the culminating overall effects of parents who are formally employed in the form of income earning which is capable of affording better nutrition and healthcare services for the child.

These findings corroborate Ering et al. (2014), who noted that in the home where parents' work demand is not flexible enough nor well able to provide the resources needed for their children's wellbeing, their children are more likely to be negatively affected when parents are employed, but could be compensated from the income earning from the labour market.

Furthermore, increased rate of employment and rate of engagement in wages and salaried work by both the father and the mother enhanced the child's education. This is made possible as a result of the income earning of each of the parents which afford them the opportunity of educating their child.

The effect of total national employment rate on the child's health status and their education were also considered. The result shows that an increased rate of total national employment enhanced both the health status and education of the child, but the education was insignificantly affected. This suggests that the simultaneous and combined effects of both parents' labour market engagement on child's healthcare may be different from the consideration of individual parent's effect. When both earn income, they are well able to afford investing in high-quality childcare, and give enriched learning experiences to their children. Duncan et al. (2014) asserted that poor families as a result of lack of resources find it difficult to achieve these.

The study further established that a higher rate of engagement of the fathers in wages and salaried work increased the mothers' engagement also, while an increased rate of labour market participation by the fathers insignificantly reduced the rate of the mothers' participation. This part of the result could be explained from the understanding of the present societal and economic situation whereby the position of mothers is shifting away from being full house wife to being partner of their spouse in generating income for the home. Even the instances of mothers being the main soul breadwinner in homes are becoming rampant. This result contradicts the view of Ilahi (2000) and Ilahi and Grimard (2000) which state that fathers' higher income earning tend to reduce mothers' engagement in labour market activities. Although the participation rate of fathers in labour market tend to reduce the rate of hours of labour participation by the mother but was not significant.

5 Conclusion and recommendation

The study investigated how the engagement of mothers and fathers in employment has influenced the health and education status of child in Nigeria between 1991 and 2017. The results, although showed some indication of parents' work-to-childcare conflicts, the compensation from the income earned as a result of labour market participation of the parents could mitigate the conflict.

When parents are not effectively or gainfully employed in quality jobs, work-to-childcare conflict may arise causing adoption of less than satisfactory childcare solutions and parents are incapacitated in providing the resources which are needed for their children's wellbeing, and thus children in such homes suffer a lot. To address the parents' work-to-childcare conflict in order to achieve the all-inclusive growth in

improvement of both childcare and effective employment which are paramount for the ultimate growth of Nigerian economy, government should therefore generate more quality jobs, proffer family-friendly policies which are adequate and capable of helping women to achieve work-family balance as done in non-Western countries, and also encourage both public and private employers of labour to do so. This will make it possible to maximise the benefits of parents working and minimise the detriments.

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