

An Investigation into the Performance of Dutse (Nigeria) as the Growth Centre of Jigawa State

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Abstract— *This paper seeks to investigate some key elements of a growth centre; the principle upon which local government headquarters and state capitals creation rest. It attempts to consider in a spatial dimension, the different channels by which the establishment and development of Dutse (Nigeria) has affected its' region (the rest major settlements in the state) after twenty-seven years of operation. The paper categorized the effects into three distinct classes: direct, indirect and induced effects. The study area is Dutse Capital, Jigawa state, Nigeria. Particular issues considered are related to population movement, (migration and commuting), industrial linkages/interference, labour recruitment and shopping patterns. Primary data was gathered through closed- ended questionnaires administered to the city's dwellers, the industrialists and their employees for the various aspect of the study. Descriptive analysis was adopted while presentation of the findings was done with charts and tables. The study reveals that the recruitment of labour has had some pronounced effects on the settlements in the region/state. That notwithstanding, industrial linkage and the generation of economic activities is limited to Dutse itself. In other words, these effects have not appreciably affected the towns and villages in the state. The trickle-down effects of the growth centre have not manifested to a stage reliable enough to sustain economic growth in the state under the investigation*

Index Terms— *Growth centre, region, population movement, industrial linkage, the trickle-down effect.*

1 INTRODUCTION

THE idea of growth centre originated with Francois Perroux [1] whose original notion of 'growth pole' was intended to convey a non- spatial polarization of the economy (abstract economic space) which is somehow parallel to problems of inter-industry linkages and multiplier effect [2]. To win intellectual acceptability in regional analysis [3 and 4] have critically dealt with Perrouxian theory. The rapid evolution of doctrinal philosophy of growth pole was also catalyzed by critical evaluation of [5] and its' subsequent review by [6].

Perroux work focused especially on the analysis of the economic aspects of the growth poles. But the opinion of the researchers in the various field regarding the growth poles are not in consensus [7], so there are different points of view regarding the growth poles coming from economists, geography experts or territory development experts. As a general and exhaustive definition, based on the analysis of the definitions given by different experts in the field, a growth pole is:

- (1) a point of economic growth;
- (2) a central location of economic activity;
- (3) a point where economic growth starts and spreads to surrounding areas;
- (4) an urban location where economic activity ignites growth and

better quality of life in the urban periphery.

Unsurprisingly since its' inception, the concept has become an accepted vocabulary of experts in regional development policymaking. [8] assessed that the concept has diffused across the globe and being adopted as a solution in the regional problem and economic development. The popularity of growth pole model is entrenched in the assumption that, growth centres are economically self-sustaining. They possess multiplier effects, external economies and, a net gain in production factors. Most importantly, as [9] succinctly put it, it remains the basis upon which state capitals and local government headquarters location rest, economic development at the growth centres may spread outwards through the trickle-down effects given some necessary requirement.

It is widely believed that demarcation of regions is more dominated by functional interrelations of the regional constituents than by administrative borders. Specifically, a functional region is characterized by high intensity of economic interaction and consists of nodes, such as municipalities, connected by economic networks and networks of infrastructure [10]. Examples of economic interaction upon which the borders may be determined are intra-regional labour commuting, business collaboration and business –

applied science collaboration trips, stable contacts. Commuting patterns is a common source for empirically identifying functional regions. The labour market is of special importance, as the links between employers and employees create a rigid foundation of the economic network in a functional region. These links are a kind of ties that form a regional economic system [11].

2 MATERIALS AND METHOD

2.1 Regional Development Strategies

Modern growth theory has devoted substantial attention to the search for the determinants of regional economic growth by the means of aggregated model. In these approaches the regional economic development has been often conceptualized as an increase in 'equilibrium' per-capita income and the interest of researchers has remained the identification of the main economic factors influencing it [12]. Generally, the local and regional development literature, [13] have brought the relevance of contextual socio-economic and institutional characteristics at the core of the analysis of regional economic growth and development as multidimensional processes. This is comprehensively presented in the table below.

TABLE 1: CLASSIFICATION OF THEORIES FOR REGIONAL GROWTH AND DEVELOPMENT

Regional Dev. concept	Basic theories	Basic development factors
Traditional exogenous neoclassical models	Neoclassical exogenous growth theory. Export base theory	Physical capital, labour, exogenous and technological progress
Agglomeration models	Cumulative causation theories. Growth Pole theories. NEG and Krugman's t	Agglomeration effects due to external economies or diseconomies
Endogenous growth and development models	Neoclassical endogenous growth models. Porter's theory. Regional business cluster theories	Human capital, endogenous technologies, networks, social-relation capital.
Regional innovation models	Theory of the innovative milieu. Learning region. Innovation system theories. Regional innovation system theories.	Entrepreneurship, innovation capacity, innovation process, knowledge diffusion, knowledge spillovers, localized interactive learning

Source: Adapted from [10]

Exceptionally, one of the salient arguments which has made the

growth centre theory an appealing regional development planning philosophy is its' trickle-down effects which assert that the growth centre induces further development of economic activity throughout its zone of influence when favourably supported with: commuting, migration, aerial differentiation, good transportation network and government subsidy. This element of the growth centre model makes it a political tool for regional development [4].

Implausibly, a growth centre may fail to perform the desired functions despite the availability of the forementioned conditions [15]. Growth centres often perform economic, political and socio-cultural functions, they serve as a vehicle for civilization and house abundant of human and material wealth. A growth centre may be generative if the relationship between it and the hinterland is appreciably symbiotic as both sides derive substantial benefits from each other. In contrary, a parasitic growth centre serves only to cripple impulse for growth that is bound in the hinterland, it's one -way affair as it benefit at the expense of the surrounding settlements. This status is inimical to regional development objective.

2.2 An Overview of the Study Area

Jigawa State is one of thirty-six states that constitute Federal Republic of Nigeria. It is situated in the north-western part of the country between latitudes 11.00°N to 13.00°N and longitudes 8.00°E to 10.15°E. Kano and Katsina state border Jigawa state to the west, Bauchi State to the east and Yobe State to the northeast. Also, Jigawa state shares an international border with Zinder Region in the Republic of Niger toward its' northern part, which is a unique opportunity for cross-border trading activities[16]. The Government readily took advantage of this by initiating and establishing a Free-Trade Zone at the border town of Maigatari.

Dutse capital in Dutse local government area of Jigawa state consists of eight political wards. According to 2007 population census [17], Dutse has a population of 17,699 making it the fourth largest city in the state after Hadejia, Kazaure and Gumel.

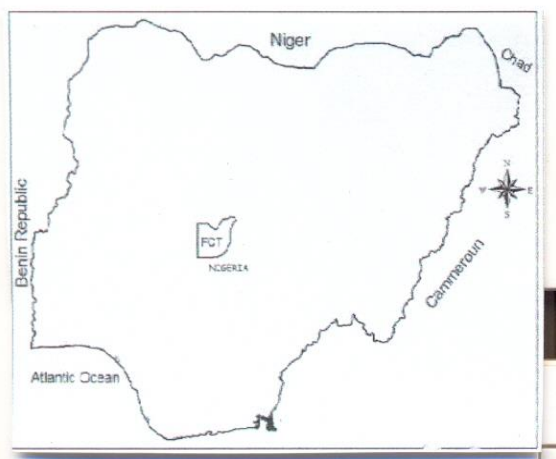
In 1999, the second democratically elected governor of Jigawa State, Alhaji Ibrahim Saminu Turaki, decentralized all the state ministries and parastatals through his transformation programme. He invested deeply in information technology project (Internet and Computer Village). The state government administrative apparatus is organized into ministries, extra-ministerial departments and parastatals, which are located across the three Senatorial districts in the State since

1999. This decentralization approach to the governmental administrative structure was seen as a move towards stimulating economic activities, socio-economic development and empowerment over a wider area since the government is the largest employer, perhaps second only to agriculture. Each ministry was located randomly to some emirates in the state base on the natural endowments and area of cultural affiliation of the cities. Although with its' administrative tenability, it had a reciprocal effect on the sustained growth of Dutse and its' consequential impact on the rest settlements as the state growth centre.

[15] confirms that the economy of Jigawa state is largely characterized by informal sector activities with agriculture as the major economic activity. Over 80% of the population is engaged in subsistence farming and animal husbandry. Trade and commerce are undertaken on the small and medium scale, especially in agricultural goods, livestock and other consumer goods. Other informal sector activities include blacksmithing, leather-works, tailoring services, auto repairs, metal works, carpentry, tanning, dyeing, food processing, masonry etc.

In order to catalyze the economic development of the state capital, Governor Sule Lamido reversed his predecessor decentralization policy, he worked diligently on infrastructural development in the capital, and the establishment of Dutse International Airport, Federal University and some other capital projects were carried out during his tenure.

FIGURE 1: MAP OF NIGERIA SHOWING THE POSITION OF THE FEDERAL CAPITAL TERRITORY



A typical centrally located Growth Centre

FIGURE 2: MAP OF NIGERIA SHOWING THE POSITION OF DUTSE (STATE CAPITAL)



A typical haphazardly located Growth Centre

2.3 Research methodology

This research adopts the quantitative approach in seeking relevant data to its' objectives. Three specimens of close-ended questionnaires were adopted for the investigation. The first specimen centred toward the industrialists, the second was directed to their employees while the last focused on the migrants (dwellers). 5.5% i.e. twenty (20) of the total available industries (360) in the study area were consulted for the needed information. By this, twenty industrialists submitted their opinions on the sources and the monthly average of their expenditure on raw materials respectively. The same questionnaire was used to collect data on the spread of the growth centre industries market field.

Having considered the average number of the industries employees, thirty (30) questionnaires were randomly distributed in each industry and a total of five hundred and thirty-five (535) out of six hundred (600) were completely filled and returned. This was used to get information concerning the origin of the labour.

The last specimen of the questionnaires was directed to the migrants. The growth centre official population figure according to the 2007 population census was projected using the relation:

$$P_1 = P_0[1+r/100]^n \dots \dots \dots \text{Equation 1}$$

Where P_1 = Population in the projected year,

P_0 = Base year population,

r = Growth rate; and

n = Number of years of the projection.

Hence 17,699 (2007 population figure) was projected for 11 years to get twenty-three thousand, four hundred and seventy-three (23,473) which served as the universe population.

In order to get the sample size, the relation:

$$n = N/1+N(e)^2 \dots\dots\dots \text{Equation (2)}$$

Where:

n = the desired sample size,

N = universe population (i.e. 23,473); and

e = constant (0.05)

Hence; $n = N/1+N(e)^2$

$$= 23473/1+23473(0.05)^2$$

$$= 400$$

The systematic random sampling method was adopted. Every fifth house along the street was selected for investigation until 400 questionnaires were exhausted. A total of three hundred and seventy-two (372) questionnaires were completely filled and these were eventually used for the analysis.

3 RESEARCH QUESTIONS

This research attempted to find the answer to the following questions

- i. To what extent does the growth centre attract migration within the state and to what extent does such migration originate beyond a commuting range of the growth centre?
- ii. To what degree do firms in the growth centre make use of materials within the region?
- iii. To what extent do employees in the growth centre spend their income within the region in the purchase of materials and services for their use?

4 FINDINGS AND DISCUSSION

This aspect of the paper presents the analysis of the data collected from the study and briefly explains each aspect of the sub-section. Tenable reason(s) is/are given to the outcome of the analysis.

5 THE DIRECT IMPACT OF THE GROWTH CENTRE

5.1 Migration of Labour to the Growth Centre

One cogent factor which seems to enhance the generality to any conclusion that may be reached emanates from the fact that there are no

institutional arrangements whereby employment in the growth centre is reserved for any part of the case study or even elsewhere. Consequently, labour comes to the growth centre not only from the case study area but also from outside the state as the table below depicts.

TABLE 2: ORIGINS OF LABOUR TO THE MANUFACTURING INDUSTRIES

Location	Frequency of Labour	Relative Frequency of Labour	Cumulative Frequency of Labour
Dutse	58	10.8	10.8
Elsewhere within Jigawa	413	77.1	87.9
Elsewhere within Nigeria	61	11.4	99.3
Outside Nigeria	3	0.56	100
Total	535	100	100

Source: Field survey (2018)

Beside the labour source outside Nigeria and elsewhere within Nigeria which account for 0.56 and 11.40% respectively of the total labour force employed in the manufacturing industries as depicted in Table 2 above, Dutse itself as the Capital (the growth centre) supplied fifty-eight (58) labour while the rest four hundred and thirteen (413) labour are from elsewhere within the state apart from the state capital.

The economic implication of the labour spread connotes that the multiplier effect of the manufacturing industries could not be apparently felt in the rest settlements in the state because of the insignificant share of labour accrued to them from the growth centre.

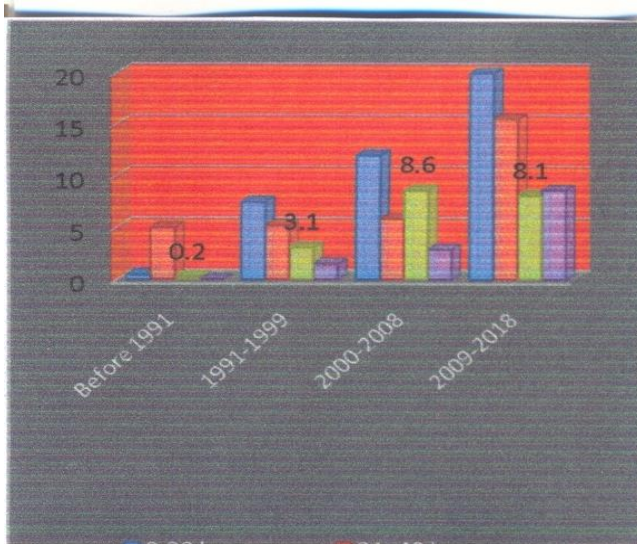


Figure 3: Correlation of the percentage of migrants within specified distance and some period of years. Source: Field survey, (2018)

According to Figure 3 above, it is detectable that no migrant from sixty kilometres and above to Dutse was found in the study area before it attained the status of the state capital, 0.2 and 0.5 per cent of the total migrants were from 40-60 kilometres and 0 – 20 kilometres to Dutse while the highest frequency accounts for the migrants within 20 – 40 kilometres away from Dutse. This justified that Dutse has been serving as a minor administrative function (traditional) before it attained its' administrative seat of the state in 1991.

The apparent rise in the percentage of migrants, according to the distance to Dutse capital, from 1991 to 1999 is observed as normal because there is a linear relationship between the percentage of migrants and distance to the Capital. This is represented by "the nearer the distance to the growth centre, the higher the number of migrants and vice versa".

Contrarily, the correlation observed in the number of migrants and their distance to the state capital within 1991 - 1999, failed in juxtaposition to what occurred between 2000 and 2008. This was exceptionally caused by the policy of the then state governor in decentralizing all the ministries in the state to the five emirates that make up the state. This action, though as to spring development across the state uniformly at a time, has brought about the irreconcilable difference in the number of migrants in relation to their distance to the state capital. The corollary of the action remains inconspicuous unrepresentativeness of each emirate in the centre. In 2009 - 2018 however, as observed in the figure, though with a very high rise in the percentage of migrants and a close match between

the migrants between 41 – 60 km and those from 60km and above. This could be due to the reversal of the decentralization policy of the government at the inception of the then newly elected state governor.

6 THE INDIRECT IMPACT OF THE GROWTH CENTRE

6.1 Industrial Linkage

An attempt was made to quantify in the financial term the spatial movement of goods and materials between industries. The reduction to a common financial denomination facilitates the revelation of the linkage between industries; thus making the general assessment of the growth centre possible. The methodology adopted is a rather simple one; simpler than input-output model. The nature of data available is not adequate for the application of the latter model.

The industrialists were inquired through the administered questionnaires on how much they spent on and components and what proportion of the materials were bought from a certain region. The factories in the growth centre were able to give a rough estimate of the "regional breakdown of their sources of materials. Similarly, they provided an estimate for the amount of money spent on materials consumed in production. The latter was then divided by the former to give a rough monetary estimate. The method may be too simple, but it allow assessment of the relative importance of the spatial movement of materials from various regions to the growth centre.

It is however conceded that the data give a most general picture. Three points further stress this: the impact upon other industries such as the construction and public utilities is ignored, only the "first round" of impact is considered and lastly the difficulty of appropriate determination of the actual source of material. Due to the above reasons, any attempt to estimate an overall economic multiplier of the total number of employment opportunities indirectly generated would be misleading hence relative strength of the links between the growth centre and other places is considered. The table below and the explanatory note on it rendered the impact of industrial linkage on the development contribution of the growth centre to the region bright.

TABLE 3: THE FINANCIAL ESTIMATE OF THE VALUES OF MATERIALS FOR DUTSE

INDUSTRIAL PLANTS PER MONTH

Source of Purchase	Amount (#00,000)	%	Cumulative Percent
Dutse	4120	12	12
Within Dutse			
Emirate	448	1.5	13.5
Jigawa State (excluding Dutse)	1455	4.2	17.7
Within Nigeria (excluding Jigawa state)	26700	78.1	95.8
Abroad	1440	4.2	100
Total Purchase	34163	100	100

Source: Field survey (2018)

Principal among the factors determining location of industries is the availability and sources of raw materials. The industrial plants in the study area were investigated to observe the locational source(s) of their raw materials. The monetary value of the raw materials (monthly purchase) in relation to some location was presented in table 3 above.

Out of an average total of three billion, four hundred and sixteen million, three hundred thousand Naira spent monthly by the industrial plants in Dutse, notably 78.1% of the amount was spent to purchase from within Nigeria (excluding Jigawa state). This wholesome monetary value would have contributed to the economy if spent within the state in place of the meagre monthly #145,500,000.00 representing 1.5%. Kano metropolitan is performing the role of intervening opportunity for the industrialists in sourcing for raw materials so also some other nearby cities of higher commercial and economic character. A mere 4.2% of the total industrial expenditure on raw materials in Dutse capital goes back to the state as the place of purchase.

7 THE INDUCED IMPACT OF THE GROWTH CENTRE

7.1 Marketing of Manufacturing Industrial Output

The approach to this section is similar to “sources of materials” above. Factories like saw-milling, welding, furniture making, rice milling, sachet water production etc were investigated to find out the field of their product. Observation on this is presented in the chart that follows. Furthermore, in order to investigate on the multiplier effect of the growth centre, an effort was made to find out the locations where the industrialists’ employees patronize for their shopping(durable and non- durable goods) activities. The result of the investigation is also presented below.

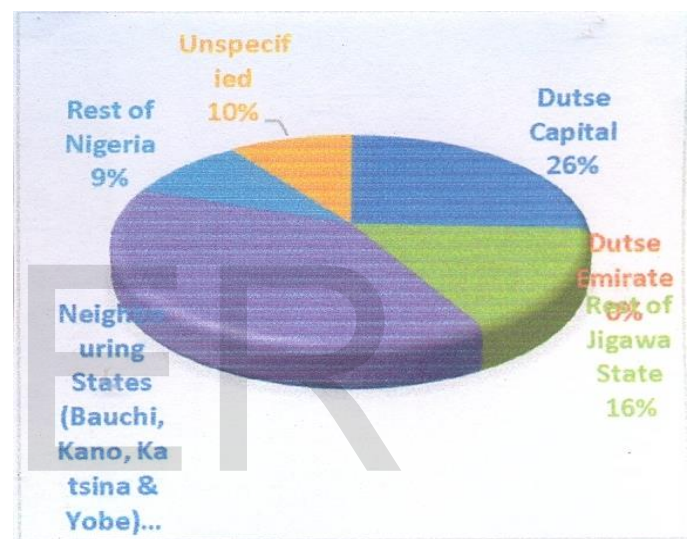


Figure 4: Number of Dutse factories and their market fields. Source: Field survey (2018)

Fairly similar to the investigation on the sources of Dutse industrial plants’ raw materials and the average monetary value incurred on them, the data gathered on the industrial plants’ market as revealed in figure 4 above is highly absurd. A whopping 39% of the industrial goods is sold to the neighbouring states (Bauchi, Kano, Katsina and Yobe) as mentioned under the points of purchase of industrial raw materials. 10% of the goods was sold to unspecified centre(s), 9% to the rest of Nigeria while the rest (26%) was sold to Dutse capital. The figure revealed that none of the industrial goods was sold within Dutse Emirate (Excluding Dutse capital). This could be due to the constant visit of the dwellers in the emirate to Dutse, hence their usual point of purchase of industrial goods remains the state capital.

TABLE 4: FREQUENCY TABLE OF DUTSE CAPITAL MANUFACTURING EMPLOYEES ACCORDING TO THE SHOPPING CENTRES THEY

PATRONIZE

Centre	% of Shoppers (Durable/ Commodities	% of Shoppers (Non – durable Commodities	Distance from Dutse Capital
Dutse	20	49	0
Kano*	39.7	4.6	87.46
Wudil*	6.2	0	76.91
Azare*	10.5	0.7	94.89
Gumel	0.3	0	102.59
Hadejia	1.3	1.1	113.36
Ringim	0	1.8	53.65
Kazaure	0	1.2	145.84
Mai,adua	8.7	12.4	200.9
Maigatari	3.8	10.5	169.16
Birnin K	2.5	8.2	123.38
Other Pla	2	10.5
TOTAL	100	100

*centres located outside the Jigawa, the study area. Source: Field survey (2018)

Table 4 above explicitly shows the frequency of the Dutse capital manufacturing employees according to the shopping centres they patronized and their respective distance¹⁶ from Dutse. It also specifies the variation in the number of shopping centre location been patronized in purchasing durable (manufactured) and non-durable commodities.

Out of all the locations, in general, Ringim and Kazaure were not patronized for manufactured commodities while Gumel and Wudil

were not also patronized for non-durable commodities. The highest percentage of respondents (39.7%) purchasing manufactured commodities did such in Kano while twenty per cent of them did their shopping on manufacturing goods in the state capital (Dutse). Apart from these, Gumel, Hadejia, Maigatari and Birnin Kudu (all from within the state) account for only 7.9% of the respondents' shopping on manufactured commodities.

Apart from the Dutse capital itself, despite the fact that Mai'adua is not within the state, it makes provision much for the non-durable commodities of the industrial plants' employees. This could be due to the existence of an international market in the location. Maigatari also attracted 10.5 % of the non-durable commodities shoppers, it also has a big market and share a boundary with the Niger Republic which could be reason for such a scenario.

8 CONCLUSION

In pursuance of the study objective been depicted by the earlier stated research questions, a brief answer shall hereby be provided to the questions based on the research discovery.

Regarding the first research question, it has been discovered that the growth centre has attracted migrants from within the state irregularly over some period of time. The inconsistency of the influx of migrant was due to the unstable state government policy concerning regional administration and growth. [18] rightly observed that rural migration is an inevitable requirement for regional development.

Secondly, investigation on the extent to which the firms in the growth centre make use of materials within the region revealed that most of the firm preferred some metropolitan cities close by to the Dutse for sourcing raw materials. Such cities include Kano; nationally recognized as a centre of commerce. Through this, the state economy is being jeopardized by the intervening opportunity rendered by metropolitan Kano.

An attempt to know about the extent to which the employees in the growth centre do spend their income within the region in the purchase of materials and services for their use generated an unanticipated revelation. The overwhelming impact of the surrounding cities (in some other states and some settlements with the international market) which provide commodities at relatively lower prices has distracted the employees to be spending tangibly within the growth region. In order to ameliorate this, the international market in the border city of Maigatari should be shifted to the growth centre.

In general, as it was reviewed in section 3 that over 80% of the Dutse population is engaged in subsistence farming and animal husbandry, this status is not capable enough to catalyses the settlement to perform its' expected function of growth centre. [19] investigated the contribution of the technological wealth of a region to its' functional performance; he discovered that the technological development domain in a region is crucial to industrial growth without which enough effective sprinkle effect could be achieved. Submitting a holistic approach to regional effective economic performance, [20] and [21] suggested that inevitable requirements for regional vibrancy include: concrete regional plan, committed government, citizens education and incentives, development projects and intra-regional peaceful mutual coexistence.

The paper has revealed the implication of government policy on regional development. It has also among some other things exposed the relapsing effects of nearby intervening opportunities and inadequacy of supportive manufacturing industries on a developing region. The absence of adequate data on the study has disallowed the adoption of input-output model being regarded as most suitable for investigating indirect and induced impacts of growth centre. The adoption of a simpler alternative method might not be technically sound enough as a scientific proof. This gap could be filled by researches in the same field in the nearest future.

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