ON ADMISSION SUBSCRIPTION ENHANCEMENT MODEL FOR NIGERIAN PRIVATE UNIVERSITIES

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ABSTRACT
Nigeria with a population of about 160 Million people and 141 universities exhibits a poorly university per capita of 1.14 Million people to one tertiary institution. Specifically in the year 2015, about 1.2 Million candidates sought admission to the 141 universities far in excess of their carrying capacity. However, in spite the large number of candidates seeking admission most private universities operate far below their carrying capacity. The specific objective of this paper, therefore, is to proffer a model that will enhance admission subscription to Nigerian private universities.

KEYWORDS: Admission Model, Nigerian Private University

INTRODUCTION
Nigeria with a population of about 160 Million people and 141 universities exhibits a poorly university per capita of 1.14 Million people to one tertiary institution. It is more alarming to note that the total number of university age (i.e. between 15 and 24 years old) youths which is quoted to be 19.3% of our population translates to about 30.4 Million Nigerian youths expected to be in the available tertiary institutions! Specifically in the year 2015, out of the 1.4 Million candidates seeking admission to tertiary institutions in Nigeria through the Joint Admission Matriculation Board, JAMB, 80% of them had a university as their first choice, that is, about 1.12 Million candidates to 141 universities. Assuming equity in admission distribution,
the university per capita for 2015 stands at about 7,943 candidates per Nigerian university. But the truth of the matter is that the 141 universities put together have a carrying capacity of about 30%. Hence, there is a serious access challenge. The access challenge is becoming difficult to arrest considering the fact that amidst gross access insufficiency the public universities have admission subscription far in excess of their carrying capacity while the private universities suffer disgraceful admission subscription apathy except for three or four private universities. For instance, for the 2014 JAMB’s admission exercise in which over 1.6 Million candidates were seeking admission to Nigerian tertiary institutions with about 1.28 Million of them preferred universities as their first choice, about 109,500 candidates sought admission to University of Ilorin (a federal university) having a carrying capacity of about 7,000. This was about 16 times the university’s carrying capacity. In contrast, Obong University (a private university) recorded only 4 candidates for access capacity over 500. One of the few private universities with continual impressive admission subscription, Covenant University, had 3,315 for a carrying capacity of about 2,000. The access flow problem which supposed to laminar has suddenly turned turbulent and chaotic!

In order to bring order into this turbulent access flow problem, JAMB blindly ordered re-distribution of candidates to universities for the purpose of achieving equity in the distribution profile. This attempt was vehemently resisted by the concerned stakeholders. (Abah, 2015; Haroldrs, 2015). Why did JAMB fail? The answer is simple. The JAMB did not based the assessment of the problem on measurable model before jumping into the turbulent current of access flow.

Therefore, the specific objective of this paper is to proffer a model that aptly described the behavior of this chaotic dynamic access flow problem in order to effectively control and streamline it into a laminar access flow.

NIGERIAN UNIVERSITIES MAP AND DEMOGRAPHIC ANALYSIS

As at October 2015, there are 141 licensed universities in Nigeria. Out of these 141 universities, 40 are Federal universities, 40 are state universities, and the remaining 61 are private universities. Hence between public and private, there are 80 and 61 universities respectively.
Table 1 shows the state location and category of the universities, while Table 2 shows the geopolitical distribution of these universities. There are six geopolitical zones and Federal Capital Territory in Nigeria. According to Table 2, South West has 45 universities, South-South has 24, South East has 20, North Central 19, North East, and North West have 14 each, and there are 5 universities in the FCT. Table 3 lists all the available private universities in Nigeria. Fig. 1 shows the Nigerian universities map by geopolitical zones. Private universities density in each of the geopolitical zone is tabulated in Table 4, and shown as percentage in Fig. 2. (Okebukola, 2015).

Table 1: State Distribution of Nigerian Universities

<table>
<thead>
<tr>
<th>S/N</th>
<th>State Name</th>
<th>Federal</th>
<th>State</th>
<th>Private</th>
<th>Total</th>
</tr>
</thead>
<tbody>
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<tr>
<td>2.</td>
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<tr>
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<td>Akwa-Ibom</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
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<tr>
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<td>0</td>
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</tr>
<tr>
<td>7.</td>
<td>Benue</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
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</tr>
<tr>
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<tr>
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<td>1</td>
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<td>1</td>
<td>1</td>
<td>3</td>
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<tr>
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<td>1</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
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<td>Ekiti</td>
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<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
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<td>1</td>
<td>3</td>
<td>5</td>
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<td>0</td>
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<td>1</td>
<td>1</td>
<td>3</td>
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<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>23.</td>
<td>Kwara</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>24.</td>
<td>Lagos</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>6</td>
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<td>Nasarawa</td>
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<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
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<td>Name</td>
<td>F:1</td>
<td>S:1</td>
<td>P:1</td>
<td>Total</td>
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<tr>
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<td>-----</td>
<td>-----</td>
<td>-------</td>
</tr>
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<td>1</td>
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<tr>
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<td>Ogun</td>
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<td>2</td>
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<td>14</td>
</tr>
<tr>
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<td>Ondo</td>
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<td>3</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>29</td>
<td>Osun</td>
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<td>1</td>
<td>7</td>
<td>9</td>
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<td>30</td>
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<td>1</td>
<td>3</td>
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<td>Zamfara</td>
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<td>0</td>
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<td>5</td>
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<tr>
<td></td>
<td><strong>Total:</strong></td>
<td><strong>40</strong></td>
<td><strong>40</strong></td>
<td><strong>61</strong></td>
<td><strong>141</strong></td>
</tr>
</tbody>
</table>

**Fig.1. Nigerian Universities Map by Geopolitical Zones**
### Table 2: Geopolitical Zone Distribution of Nigerian Universities

<table>
<thead>
<tr>
<th>S/N</th>
<th>Zone Name</th>
<th>Number of Universities</th>
<th>Total</th>
</tr>
</thead>
<tbody>
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<td></td>
<td></td>
<td>Federal</td>
<td>State</td>
</tr>
<tr>
<td>1.</td>
<td>North East</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>2.</td>
<td>North West</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>3.</td>
<td>North Central</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>4.</td>
<td>South East</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>5.</td>
<td>South West</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>6.</td>
<td>South South</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>7.</td>
<td>FCT</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Total:</td>
<td>40</td>
<td>40</td>
</tr>
</tbody>
</table>

### Table 3: Nigerian Private Universities: Name, Location, State, and Geopolitical Zone

<table>
<thead>
<tr>
<th>S/N</th>
<th>Name &amp; Location</th>
<th>State</th>
<th>Geopolitical Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Babcock University, Ilishan-Remo</td>
<td>Ogun</td>
<td>South West</td>
</tr>
<tr>
<td>2.</td>
<td>Madonna University, Okija</td>
<td>Imo</td>
<td>South East</td>
</tr>
<tr>
<td>3.</td>
<td>Igbinedin University, Okada</td>
<td>Edo</td>
<td>South South</td>
</tr>
<tr>
<td>4.</td>
<td>Bowen University, Iwo</td>
<td>Osun</td>
<td>South West</td>
</tr>
<tr>
<td>5.</td>
<td>Covenant University, Ota</td>
<td>Ogun</td>
<td>South West</td>
</tr>
<tr>
<td>6.</td>
<td>Pan-Atlantic University, Lagos</td>
<td>Lagos</td>
<td>South West</td>
</tr>
<tr>
<td>7.</td>
<td>Benson Idahosa University, Benin City</td>
<td>Edo</td>
<td>South South</td>
</tr>
<tr>
<td>8.</td>
<td>American University of Nigeria, Yola</td>
<td>Adamawa</td>
<td>North East</td>
</tr>
<tr>
<td>9.</td>
<td>Redeemers University, Ede</td>
<td>Osun</td>
<td>South West</td>
</tr>
<tr>
<td>10.</td>
<td>Ajayi Crowther University, Oyo</td>
<td>Oyo</td>
<td>South West</td>
</tr>
<tr>
<td>11.</td>
<td>Al-Hikmah University, Ilorin</td>
<td>Kwara</td>
<td>North Central</td>
</tr>
<tr>
<td>12.</td>
<td>Caritas University, Amorji-Nke, Enugu</td>
<td>Enugu</td>
<td>South East</td>
</tr>
<tr>
<td>13.</td>
<td>CETEP City University, Lagos</td>
<td>Lagos</td>
<td>South West</td>
</tr>
<tr>
<td>14.</td>
<td>Bingham University, Karu</td>
<td>Nasarawa</td>
<td>North Central</td>
</tr>
<tr>
<td>15.</td>
<td>Al-Qalam University, Katsina</td>
<td>Katsina</td>
<td>North West</td>
</tr>
<tr>
<td>16.</td>
<td>Renaissance University, Enugu</td>
<td>Enugu</td>
<td>South East</td>
</tr>
<tr>
<td>17.</td>
<td>Bells University of Technology, Ota</td>
<td>Ogun</td>
<td>South West</td>
</tr>
<tr>
<td>18.</td>
<td>Lead City University, Ibadan</td>
<td>Oyo</td>
<td>South West</td>
</tr>
<tr>
<td>19.</td>
<td>Crawford University, Igbesa</td>
<td>Ogun</td>
<td>South West</td>
</tr>
<tr>
<td>20.</td>
<td>Kwararafa University, Wukari</td>
<td>Taraba</td>
<td>North East</td>
</tr>
<tr>
<td>21.</td>
<td>Crescent University, Abeokuta</td>
<td>Ogun</td>
<td>South West</td>
</tr>
<tr>
<td>22.</td>
<td>Novena University, Ogume</td>
<td>Delta</td>
<td>South South</td>
</tr>
<tr>
<td>23.</td>
<td>University of Mkar, Mkar</td>
<td>Benue</td>
<td>North Central</td>
</tr>
<tr>
<td>24.</td>
<td>Joseph Ayo Babalola University, Ikpeju-Arakeji</td>
<td>Osun</td>
<td>South West</td>
</tr>
<tr>
<td>25.</td>
<td>Caleb University, Lagos</td>
<td>Lagos</td>
<td>South West</td>
</tr>
<tr>
<td>26.</td>
<td>Fountain University, Osogbo</td>
<td>Osun</td>
<td>South West</td>
</tr>
<tr>
<td>27.</td>
<td>Obong University, Obong-Ntak</td>
<td>Akwa-Ibom</td>
<td>South South</td>
</tr>
<tr>
<td>28.</td>
<td>Salem University, Lokoja</td>
<td>Kogi</td>
<td>North Central</td>
</tr>
<tr>
<td>29.</td>
<td>Tansian University, Umunya</td>
<td>Anambra</td>
<td>South East</td>
</tr>
</tbody>
</table>
Table 4: Percentage of Private Universities in Nigerian Geopolitical Zones

<table>
<thead>
<tr>
<th>S/N</th>
<th>Zone Name</th>
<th>Number of Private University, N</th>
<th>% = N/61 x 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>North East</td>
<td>2</td>
<td>3.3%</td>
</tr>
<tr>
<td>2.</td>
<td>North West</td>
<td>1</td>
<td>1.6%</td>
</tr>
<tr>
<td>3.</td>
<td>North Central</td>
<td>6</td>
<td>11.5%</td>
</tr>
<tr>
<td>4.</td>
<td>South East</td>
<td>9</td>
<td>14.8%</td>
</tr>
<tr>
<td>5.</td>
<td>South West</td>
<td>28</td>
<td>45.9%</td>
</tr>
<tr>
<td>6.</td>
<td>South South</td>
<td>11</td>
<td>18%</td>
</tr>
<tr>
<td>7.</td>
<td>FCT</td>
<td>4</td>
<td>6.6%</td>
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</table>
ADMISSION SUBSCRIPTION ENHANCEMENT MODEL

Modeling is system characterization or description for the purpose of representing that system by the model. Hence, the quality of the characterization determines how the model can be used to represent that system. There are basically two types of system’s description, namely, describe “How the system looks” and describe “How the system behaves” For a dynamic system, description by behavior is better. System description by behavior is concerned with time or space mathematical description of that system. But definitions of a few relevant terms are pertinent here. These terms are laminar flow, and chaotic flow. Laminar flow is characterized by regular and predictive flow regime, while chaotic flow is defined as the behavior of dynamic system which is highly sensitive to initial conditions, that is, small differences in the initial conditions can lead to wide divergence unpredictable outcomes.

Fig.2. Pie Chart of Private University Distribution in Geopolitical Zones
But what type of system is access flow problem: laminar or chaotic? It is a chaotic system. The aforementioned initial conditions are similar to the equilateral triangular constraints (cost, time, scope) in project management. However, in case of the chaotic access flow regime, the three sides of the triangular constraints/initial conditions are cost, staff quality, and aesthetic of structure. A right angle triangular initial condition is more likely because the initial conditions are not of the same weight. Fig. 3(a) shows the triangular project management constraints; while Fig 3(b) is that of access flow initial conditions.

Fig. 3. Equilateral Triangular Project Management Constraints

Fig.4. Chaotic Access Flow Initial Conditions/Constraints
How important are these initial conditions/constraints in boosting admission subscription in private universities? In answering this question, the initial conditions will be examined one by one:

(1). AESTHETIC OF STRUCTURE:
It seems the most important attracting factor for high admission subscription is the aesthetic level of structure available. Even in real life, it is the beauty of a product that is considered before its functionality. Unfortunately, NUC’s instrument does not cover this aspect. The provision of adequate infra-structure is as important as the structures themselves. Your campus is like a show room the more attractive it is the more customers will visit it.

(2). STAFFING AND INNOVATIVE PROGRAMMES:
The available quality and quantity of staff also matter. Candidates are attracted to your institution by its beauty but parents are more persuaded to bring their wards to your based on the quality of staff. It is difficult for any private university to break even running the traditional programmes available in public universities. Candidates will always prefer public universities because of security in quality of service and availability of service. To attract them, innovative programmes must be offered. Some of these innovative programmes are Mechatronics Engineering, Biomedical Engineering, Power System engineering, Geographic Information System, Computational Linguistics, TV and Film productions, etc. Include vocational training in your curricula.

It is, however, regrettable that the same NUC that encourages innovative programmes, is the same body that will turn round to say no BMAS for that innovative programme, therefore you have to wait. There is nothing wrong in being proactive as you are talking about new programmes get the BMAS ready as a mark of encouragement.

(3). FEES:
Where the above two factors are in place, amount of fees charged is in consequential. And also where the two factors are not in place, you must be ready to offer you programmes at ridiculous fees to get even handful of students.
CONCLUSION AND RECOMMENDATIONS

In spite the fact that generally the demanded access far exceeded the carrying capacity of Nigerian universities, most of the private universities have been operating far below their carrying capacity. The aesthetic of structure, quality and quantity of staff vis-à-vis innovative programmes, and fee regime have been identified as admission subscription determinants. In order to enhance admission subscription in private universities attention should be paid to balancing these factors.

It is therefore recommended that in order to boost admission subscription in private universities:

1.) Innovative programmes such as mechatronic engineering, power system engineering, biomedical engineering, geographic information system, and film and tv production should be mounted;
2.) Attention must be paid to the beauty of the campus; and
3.) High quality staff must be employed in the right quantity;
4.) Make acquisition of a vocational skill mandatory for every student.

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