

# ODL for Knowledge Development and Economic Growth in South Africa a

# **Policy Analysis Paper for ODL**

# Darrell R. Myrick

(Department of Public Administration and Management, University of South Africa (Unisa), South Africa)

Abstract: The notion that ODL can be a mechanism for economic growth and sustainable development is in much evidence on the African continent. Open distance and learning, for example can be found to be a key component of Namibia's development strategy. Indeed, there are four (4) funded ODL institutions in Namibia—namely, the Centre for External Studies (CEMS) at the University of Namibia, the Centre for Open and Lifelong Learning at the Polytechnic of Namibia, the Namibian College of Open Learning and the National Institute for Educational Development. Moreover, the Namibian Broadcasting Company is legislated to provide educational broadcasting, thereby supporting and advancing the national agenda for ODL in Namibia. Farther to the north, the demand for education as a commodity and limited supply of education service providers fuelled the need for ODL in Nigeria. Open and Distance Learning in Nigeria has its roots in [corresponding] students, as far back as 1887, enrolling for the University of London's matriculation exam. In modern times, the Ahmadu Bello University in Nigeria offers the Correspondence and Teacher's In Service Programme and the University of Lagos is home to the Distance Learning Institute, formerly known as the Correspondence and Open Studies Unit. Other distance education institutions include the National Teachers" Institute and the External Study Programme, now known as the Centre for External Studies at the University of Ibadan. Considering education to be a developmental process in Nigeria, development can then be said to have been advanced when one considers that, comparatively, more than 300,000 graduate teachers were produced as compared to 45,150 eight years earlier in 1982. Sampling revealed that many students taught by NTI teachers went on to become successful entrepreneurs, women in business and teachers in their own right. This leads to a reflection of ODL in the South African context and how ODL manifest itself as a mechanism for economic growth and development. Towards that end, ODL funding in South Africa is discussed.

**Key words:** open and distance learning (ODL); government subsidies and grants; economic growth **JEL code:** L25

# 1. Introduction

Nearly one-third of all publically funded students in South Africa are enrolled in Open and Distance Learning (ODL) curriculums (Pityana, 2009, p. 12). The majority of those students are enrolled in the pre-emanate ODL institute, the University of South Africa (UNISA). From the perspective of UNISA and in recognition of such high enrolment, whether ODL is having an impact on economic growth is a relevant question. Should ODL be found to

Darrell R. Myrick, Ph.D., Professor, University of South Africa (Unisa); research areas: public finance, public policy, political science, open distance learning, economic development and statistics. E-mail: myricd@unisa.ac.za.

have minimally contributed to economic growth, the question then is: How can ODL be strategically implemented to have a more significant impact on the national economic growth objective? On the other hand, if it were found that ODL is not having any impact on economic growth, then the question becomes: What are the challenges facing ODL, as a mechanism to effect economic growth and development? These questions are indeed most relevant to UNISA, with the institution being funded either directly or indirectly by the government of the day. For the government, the questions are certainly relevant, considering low economic growth, a high national rate of unemployment and the need to break the cycle of poverty by way of an educated constituency. Knowledge development by way of ODL should then become a national priority.

# 1.1 Linking Economic Growth and ODL Education

The notion that ODL can be a mechanism for economic growth and sustainable development is in much evidence on the African continent. Open distance and learning, for example can be found to be a key component of Namibia's development strategy. Indeed, there are four (4) funded ODL institutions in Namibia—namely, the Centre for External Studies (CEMS) at the University of Namibia, the Centre for Open and Lifelong Learning at the Polytechnic of Namibia, the Namibian College of Open Learning and the National Institute for Educational Development. Moreover, the Namibian Broadcasting Company is legislated to provide educational broadcasting, thereby supporting and advancing the national agenda for ODL in Namibia. As a measure of the impact of ODL to the national fabric, the graduates produced, specifically, from the four institutions mentioned have played an important role from 1990 on in realising development goals. Ninety-nine percent of the graduates of the CES are gainfully employed and active in their communities (Nekongo-Nielsen n.d., pp. 2-7).

Farther to the north, the demand for education as a commodity and limited supply of education service providers fuelled the need for ODL in Nigeria (Aderinoye & Ojokheta, 2004). Open and Distance Learning in Nigeria has its roots in [corresponding] students, as far back as 1887, enrolling for the University of London's matriculation exam. This was distance education in its earliest form. In modern times, the Ahmadu Bello University in Nigeria offers the Correspondence and Teacher's In Service Programme and the University of Lagos is home to the Distance Learning Institute, formerly known as the Correspondence and Open Studies Unit. Other distance education institutions include the National Techners' Institute and the External Study Programme, now known as the Centre for External Studies at the University of Ibadan. Considering education to be a developmental process in Nigeria, development can then be said to have been advanced when one considers that, comparatively, more than 300,000 graduate teachers were produced as compared to 45,150 eight years earlier in 1982 (National Teacher's Institute in Aderinoye and Ojokheta, 2004, p. 4). The high throughput of teachers by way of distance education has impacted development by enhancing stability in the education system, producing quality graduates, and facilitating high retention rates and declining dropout rates. Sampling revealed that many students taught by NTI teachers went on to become successful entrepreneurs, women in business and teachers in their own right. This leads to a reflection of ODL in the South African context and how ODL manifest itself as a mechanism for economic growth and development. Towards that end, ODL funding in South Africa is discussed.

## **1.2 ODL Institutional Funding**

With planned spending on education being the highest non-interest expenditure item (R207 billion) for the 2012, there can be no doubt of the number one priority in South Africa (National Treasury, 2012). Education is said to be the key to reducing poverty. Yet, a review of how money is to be spent (R17 billion for loans and bursaries, R850 million for university infrastructure and a target to increase enrolments from 862,000 to 962,000) reveals that ODL as a priority is nowhere to be found. In other words, as a national priority and mechanism for economic

development, and for that matter to reduce poverty, ODL is not mentioned at all. It, however, might be argued that within the allocation to universities (R15 billion in 2010/11) of which UNISA received approximately 7% as government subsidies and grants, it is inherent and implied that ODL is expected to contribute towards national development and economic growth. The approximation of 7% is based on analysis of the UNISA (2009, p. 56) Annual Report where it was indicated that R1.36 billion had been received as subsidies and grants, relative to the estimates of expenditure (National Treasury, 2009, p. 70) indicating an allocation of R17.49 billion for institutions of higher education. Further to that analysis, a review of the University of Pretoria's (2009) Annual Report indicates receipt of R1.09 billion in council controlled and unrestricted subsidies and grants, with that amounting to 7% of the R17.49 billion allocation for the year. Comparatively, UNISA can be said to have a larger education [service] provider footprint, not only within South Africa, but on the African continent as well. Indeed, UNISA has been coined a "mega comprehensive" ODL institution with more than 300,000 students (UNISA, 2011, p. 5). Yet even with a much larger footprint, a larger client and customer base, and in striving to fulfil its Open and Distance Learning mandate, it [UNISA] receives roughly that same amount of subsidies and grants as any other university in South Africa. The argument made here is that this (underfunding as it were) places a considerable challenge and barrier to ODL contributing towards knowledge development and economic growth in South Africa.

#### 1.3 The Notion of Knowledge Development through ODL

The earliest purposeful thought that education should be for development can be found in Daniel's (2004) speech on "The Sustainable Development of Open and Distance Learning for Sustainable Development". There it was pointed out that while education can be an end in itself, for much of the world's population it is a route to development. As a notion to be explored in its total context, development of the individual in mind, body and spirit is essential for the economic development of the state. In other words, the development of individuals in those [personal] areas can maximise the achievement of national economic productivity. Without individual development there can be no economic development. Daniels referred to personal development leading to the strengthening of families, communities, society and ultimately the nation. Implicitly, individual development facilitates the development of the state. To that end, the indication of successful development, or lack thereof, will be reflected for example in gross domestic product—an indicator of productivity. Free agency is therefore necessary for optimal individual development and freedom to develop one's mind, their ability to seek education and to be educated without restriction. Open and distance learning is well positioned to educate without restriction, as it has no borders-physical or mental. Indeed, it [ODL] breaks the so called "iron triangle" and challenges the notion that education is an end unto itself. Indeed, education for development departs from the notion of an "end unto self' and becomes something more, i.e., a movement towards advancing the quality of life of individuals and the economy as well. The iron triangle (access, quality and cost) cease to be a constraint.

Still, there is much to be desired in featuring ODL as a component for knowledge development, economic growth and equity. This is most evident in Marope (2005, p. 57) where at the least ODL is noted in the historical institutional overview. As in South Africa and Nigeria, there is a history of ODL in Namibia but Marope's World Bank study fleetingly alludes to ODL (*Under Tertiary Education and Training*) as a strategy for improving unsatisfactory development performance. Yet, there is lesson to be learned, as the study pointed out that ODL course material was still print-based due to students not having access to computers and that conferencing facilities were in place but subject to inefficient telecommunications and a shortage of teachers in certain geographic areas. Nevertheless, the inclusion and discussion of ODL in a developmental report supports policy advocacy and consideration in the South African for ODL to be raised to a national priority for national development.

# 2. Background to the Study

The University of South Africa (UNISA) caters to a little more than 30% of the total student population enrolled in South African Universities (IEASA, n.d.). With such a large number, more than a quarter million, Open and Distance Learning (ODL) is raised to the level of being a strategic [organizational] tool and mechanism for [education] service delivery. More importantly for UNISA, ODL is the primary knowledge delivery system as compared to other Universities where ODL is secondary to face-to-face contact and lectures. Stellenbosch University, for example, like most South African Universities is a full contact university with an enrolment of around 24,000. Notably, Stellenbosch includes distance learning as part of its student centred teaching management plan (Stellenbosch 2003), yet its ODL enrolment, as in most South African Universities, pales in comparison to UNISA.



Figure 1 DHET (2010/11–2014/15) Post School Diagram

The International Educational Association of South Africa (IEASA n.d., p. 20) alluded to the South African Government having asked higher education to play a fundamentally greater role in the development of the country. Making ODL a national priority and educational mechanism for development remains to be considered and articulated towards that end. South African Universities now fall under the administration of the Department of Higher Education and Training (DHET) by virtue of the Higher Education Act, no. 101, 1997. Policy formulation and input for ODL to be national priority would then emanate from the DHET.<sup>1</sup> Two Department of Basic Education (DBE) planning documents for education plot the way forward but as policy documents are

<sup>&</sup>lt;sup>1</sup> Viewed as being too big at the 2009 ANC Polokwane conference, the Department of Education was split into two departments—the Department of Higher Education and Training and the Department of Basic Education. A number of bills resulted from the split to provide for the delineation of responsibilities and other administrative matters—namely the Higher Education Laws Amendment Bill [B24B-2010], Skills Development Levies Amendment Bill [B25-2010] and Higher Education and Training Laws Amendment Bill [B26B-2010].

conspicuously focused on basic education. Those policy documents include the DBE's *Action Plan to 2014*, a strategy to strengthen weak areas in the education system and *Schooling 2025* that articulates the DBE's vision of where it would like to be in 2025. On the other hand, the DHET's (2010/11–2014/15:4) Strategic Plan articulates a 20-30 year strategic perspective that is all but devoid of Open and Distance Learning as a component of the post schooling system.

Conclusively, Open and Distance Learning (ODL) is an educational [service] delivery system supporting more than 300,000 students within and outside South Africa. The ODL mandate, however, is supported by budgeted amounts in the form of subsidies and government grants, more or less equal to that of other institutions under the DHET umbrella. With a larger market, a larger customer and client base, ODL should feature more prominently, for example, in the post school diagram above. This equates to ODL being raised to a national priority and even increasing respective funding due to the larger role played in the higher education sector.

# 2.1 Key Concepts

There are three (3) key concepts essential for the examination of the core research problem articulated in this paper. Those concepts are: (1) a constructivist epistemology (Gergen, 1997) for ODL; (2) the notion of economic growth as a measure of national productivity; and (3) the need for economic development with an objective of maximising the standard of living of graduates and for that matter all South Africans sooner, rather than later.

Before discussing these concepts, as there was mention of the "core research problem", it becomes necessary to now state that the research problem is, indeed, that there is uncertainty as to whether ODL contributes to economic growth and development. Thus if ODL were a national priority, and duly funded as such, there could be no question as to the effect of ODL on, for example, poverty eradication and maximising the quality of life. The research question then is:

Is Open and Distance Learning (ODL) Having An Impact on National Productivity?

The first concept ODL can be simply defined as the instance when the instructor is absent and the possibility of two way communications for teaching and learning still remains (Menconi, 2003, p. 106). Still constructivist epistemology leads to a definition that facilitates knowing "how" what is known of ODL is known, examining the basis of knowledge pertaining to ODL, and understanding what are the truths surrounding the discipline of ODL. A constructivist approach is most appropriate, as ODL as a discipline has evolved and is still evolving, such that the epistemology of ODL is more or less a work in progress. Distance learning enables one to learn in their own time, at home or wherever they choose—reading, watching or listening to material supplied, doing course activities and assignments with regular support from a tutor. Open and distance learning, in no uncertain terms, has evolved from mere correspondence courses to online e-learning—thus the need for constructivist epistemology.

The second and third concepts are relatively easy to understand in terms of economics. The nation desires to achieve a target rate of growth. As such, economic growth can be measured by the increase in the amount of goods and services produced by an economy over time. The research question endeavors to examine to what extend does ODL (government subsidies and grants for ODL) contribute to increasing the production of goods and services. To that end, economic development refers to sustained and definitive actions, policies and programmes that maximize the standard of living. What is desired to be known here is whether ODL, as proxied by the amount of government subsidies and grants, in some way or fashion, contributes to maximizing national productivity. These two concepts, economic growth and development, are somewhat interrelated but importantly, it remains to be determined whether ODL has some causal effect, and if it does, it should be raised to that of a national priority.

#### 2.2 Key Argument

The primary and key argument put forth is that ODL should be raised to the level of a national priority and funded as such. It could even be articulated (policy advocacy by DHET) as a strategic mechanism, with an aim to contribute toward economic development and growth. As it is, education is the number one priority inherent and implied by way of the budget vote—the greatest amount of funds budgeted as per the estimates of expenditure for education. The ODL aspect of the education budget vote, ODL should be broken out or indicated as a separate line item. This argument is supported by the mere fact the UNISA, for example, receives virtually the same amount of funding as other comprehensive universities but comparatively has far larger and greater institutional needs and arrangements. Its [student] client base, largest in numbers, exemplifies those larger institutional needs and arrangements.

## 3. Research Method and Design

Earlier it was stated that the research problem was that there was uncertainty of whether ODL contributes to economic growth and development. The problem, as it were, can be restated in a number of ways. In the form of a null hypothesis ( $H_o$ ): ODL is not having an effect on economic growth and development. In turn, stating an alternative hypothesis ( $H_i$ ): ODL does indeed have and effect and increases economic and development, i.e., national productivity as per GDP. As an alternative to quantitatively test the hypothesis, it may also be said the ODL is not regarded as a national priority with the outcome being that it cannot possibly contribute to the national economic growth and development agenda. It, nevertheless, is aligned with and leads to the research question of: Is ODL having an impact on national productivity, in terms of economic growth and development. The discussion above can, therefore, be considered to be geared towards arguing for ODL to be raised to the level of a national priority and funded accordingly.

# 3.1 Insight into the Education Problem

The International Education Association of South Africa (n.d.) reported that in 1993 about 47% of all students in higher education were white. Forty percent (40%) of the students were African, with the remaining 13% being comprised of Indians and Coloureds. By 2005 the portion of white students had shrunk to 25%. Through to 2012, it can be assumed that the [white] percentage has continued to decline and the combined percentage of non-whites has and will continue to increase. The problem relative to South African Universities and the tertiary system of education is that of not being able to absorb the increasing numbers of students desiring to attain a higher degree and the changing demographics the student body. With education being the "number one" expenditure item, the government of the day is undoubtedly committed to assuring access to education—especially higher education beyond matric. Open and Distance Learning is the immediate solution to the problem.

#### 3.2 Research Methodology

A quantitative research methodology and design is used to answer the primary research question of: Is Open and Distance Learning (ODL), as proxied by council controlled unrestricted government subsidies and grants (GOV\_SUB), having and impact on national productivity (GDP). Healy (1999, pp. 383-410) and Norusis (1998, pp. 223-229) present statistical techniques to be employed towards answering the research question and addressing the research problem, as to the uncertainty of whether ODL impacts national productivity? Two variables were identified above towards a univariate model—namely, GOV\_SUB as the independent variable and

GDP as the dependent variable. Further to Healy's statistical approach, the following quantitative statistical methodology and techniques will be applied as follows:

(1) Illustrating a scatter diagram to estimate a regression line and dispersion.

(2) Calculating alpha (*a*) and beta (*b*), to determine the slope of the regression line and the direction of the independent variable, i.e., negative or positive (SPSS).

(3) Illustrating or writing a regression line (formula /model) to summarise the nature of the relationship.

(4) Calculating the coefficient  $r^2$  (Pearson's r) to determine correlation.

(5) Conducting a test of the null hypothesis ( $H_o$ ) as noted earlier using a Paired-Samples T Test, to determine whether ODL is not having an effect or impact on economic growth and development (GDP), or statistically test the hypothesis that the average difference of the means is zero (0), i.e., no difference means the two means are equal and there is no causal effect between the two samples (Norusis, 1998, p. 221).

The following is the data set to be evaluated using the statistical techniques mentioned above:

Year	Government Subsidies & Grants <sup>4</sup> (000	)) Gross Domestic Produ	ct (000)			
1992	210,032	372,225				
1993	223,706	426,133				
1994	256,161	482,120				
1995	278,647	548,100				
1996	356,636	617,954				
1997	319,924	685,730				
1998	393,035	742,424				
1999	412,361	813,683				
2000	453,045	922,148				
2001	500,580	1,020,007				
2002	561,086	1,171,086				
2003	759,079	1,272,537				
2004	819,155	1,415,273				
2005	911,068	1,571,082				
2006	962,227	1,767,422				
2007	876,652	2,016,185				
2008	973,816	2,262,502				
2009	1,093,173	2,398,155				
2010	1,319,888	2,661,434				
2011	1,514,349	2,964,261				
	Table 2Descripti	ve Statistics				
Variables	Mean	Standard Deviation	Ν			
RSA_GDP	1,306,523.05	796,706.723	20			
GOV_SUB	659,731.00	384,405.844	20			

 Table 1
 Government Subsidies & Grants<sup>2</sup> and Gross Domestic Product<sup>3</sup> (1992-2011)

<sup>2</sup> Source: 1992, 1994, 1995, 1996, 2010–UNISA Department of Finance; 1993, 1997–2009–UNISA Annual Reports in the library archives; 2011-Department of Institutional Statistics and Analysis (DISA).

<sup>&</sup>lt;sup>3</sup> Source: UNISA Bureau of Market Research; Statistics South Africa, Quarterly GDP at Current Prices, Additional downloads, Tables in excel format, accessed 23 May, 2012 http://www.statssa.gov.za/publications/statsdownload.asp?PPN=P0441&SCH=5171.
<sup>4</sup> Council Controlled and Unrestricted.



Figure 2 Scatter Diagram: RSA GDP by Government Subsidies and Grants

Table 3	Estimates	for Alpha	(a)	and	Beta (	<b>b</b> )
---------	-----------	-----------	-----	-----	--------	------------

Model		Un-stand Coeffi	Un-standardized Coefficients		- t	t Sia	95% Confidence Interval for B		Correlations		
		В	Std. Error	Beta	-ι	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part
1	(Constant)	-36297.540	69869.447	,	-0	0.520 0.610	-183087.800	110492.720			
	GOV_SUB	2.035	0.092	0.982	22	2.102 0.000	1.842	2.229	0.982	0.982	0.982

Note: Dependent Variable: RSA\_GDP / Independent Variable: GOV\_SUB.

#### 3.3 Data Analysis: Findings

The Statistical Package for the Social Sciences (SPSS) was used to regress the dependent (*Y*) variable RSA\_GDP on the independent variable (*x*) GOV\_SUB. Generally, the statistical relationship between the means of the samples is examined for direction and causation. One aim is to determine the effect of one on the other, i.e., the independent variable on the dependent variable. At best, a model will be offered where a level of national output can be predicted on the level of government subsidies and grants for ODL. The straight line equation Y = a + b x is fundamental to that end.

To begin, Figure 2 illustrates the pattern of cell frequencies, as a precursor to calculating measures of association. Scatter diagrams (not shown) were plotted for each variable; for each, a regression [freehand] line appeared to be increasing with a few points just slightly off the margin. Figure 2 summarizes the two scatter diagrams for the data in bi-variate Table 1 and likewise it can be see that a *line of best fit* would be increasing although with a number of outliers. Table 2 shows the means of the two samples, with there being good representation of the research interest concerning the relationship between funding for ODL and national productivity. There is a desire to know and understand to what extent does ODL impacts GDP? Between the two variables, there appears to be a linear relationship but there remains a need to accurately calculate the regression line to determine the extent to which the (x) variable improves the ability to predict (Y). The alpha (a) and beta (b) variables remain to be determines as well.

Table 3 summarise the SPSS output for calculating the regression Y = a + bx. The alpha (*y intercept*) was calculated to as -36,297 Rands and the beta (*slope*) of the regression line was calculated as 2.035. The direction of beta is positive and therefore indicates a positive and increasing relationship between the two variables. An increase in Subsidies and Grants results in an increase in national productivity. The following linear equation is therefore offered as a model to determine the impact of ODL funding on GDP: GDP = -36,297 + (2.03). GOV\_SUB. That is, the level of national productivity (GDP) can be predicted based on the amount of Government Subsidies and Grants provided. Indeed, this is a model to predict GDP based on the amount of government subsidies and grants but the model itself is not absolute. There is recognition that there are other factors and variables that will impact GDP. A suggestion then is that a multivariate model be developed taking into consideration variables such as university through-put, youth unemployment, and proxies for various manufacturing and retail sectors that absorbs ODL graduates. For the moment, the importance of the bi-variate model offered is that there is a positive relationship between the two variables and that government's funding is well placed and spent towards the national economic growth objective. To further substantiate this

Pearson's r to determine correlation was calculated.

Table 3 also shows the results of calculating partial correlations between the two variables. The correlation  $r^2$  (Pearson's r) was calculated as .98. In other words, there near a 1:1 relationship between the two variables; for every R1 given for ODL, there is a R1 increase in GDP. There is a high correlation and positive relationship between the two variables. Still, although there may be high correlation, there are several reasons why the measured association and the model itself is not 100% stochastic. Firstly, added variables for a multi-variate model may have some effect on the partial correlation between the two variables stated here. In other words there may be, undoubtedly, other explanatory effects for GDP. Secondly, an (n) sample of 20 years was used. Notably, the efficacy of statistical outcomes increases with large sample sizes. Considering that UNISA had resulted from the merger of Technikon SA and VUDEC, not to mention the new democracy from 1994, data going as far back as 1992 was readily accessible. Nevertheless, the bi-variate model < GDP = -36,297 + (2.03).GOV\_SUB > does offer a point of departure for examining the effect of government funding on national productivity. This model and research can at best be expanded upon to identify and explain additional causal effects.

Paired Variables	Paired Differences – Test Value = $0$							
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Lower	Upper	_		
Pair 1 GOV_SUB - RSA_GDP	-646,792.	425,410.670	95,124.718	-845,890.372	-447,693.728	-6.79	19	.000

Table 4 Paired-sample T Test

Finally, a test of hypothesis was conducted at a 95% confidence interval, testing the null hypothesis  $(H_o)$  that ODL is not having an effect on economic growth and development. The null hypothesis would be rejected if it were found that there was no difference between the two sample means. Table 4 shows the results of a *Paired Sample T-Test* where the upper and lower boundaries were set as decision criteria. The following normal cure illustrates the decision making process:



Figure 3 Normal Curve for T Test of Significance—95% Confidence Interval

The calculated *t score* was -6.97 and lies far outside the green shaded acceptance area. The null hypothesis that there is no difference between the two sample means is therefore rejected. Rather, the alternative Hypothesis  $(H_1)$  that there is a difference between the sample means, and that the difference is caused or a result of the independent variable effecting the dependent variable, lead to concluding that government subsidies and grants [GOV\_SUB] does indeed have an effect on GDP and in turn economic development [GDP].

#### 4. Conclusion

The key argument made was that ODL should be raised to the level of being a national priority. Open and Distance Learning has the potential to be the solution to absorbing the ever increasing number of matriculants that desire to attain a higher degree. Those not able to attend a full service university can, as an alternative, look to a comprehensive university such as UNISA. But to play this key pivotal role, an increase in government subsidies and grants specifically for ODL will be necessary. An examination of the relationship between the two variables GOV\_SUB and GDP revealed that there is an extremely high correlation. For the moment, it is concluded that government's money is well placed and ODL is having more than a minimal effect on economic development. However, to build a more stochastic model, other variables should be introduced in the regression model to explore and identify other causal effects for national productivity. Undoubtedly, there are other effects and explanatory reasons for increasing GDP but here it was found that ODL, proxied by the amount of government subsidies and grants, has played a critical role in advancing the national economic growth agenda. Relative to this research, at best a straight forward bi-variate model has been offered in the form of  $\langle GDP = -36,297 + (2.03).GOV_SUB >$  and this model should be augmented with the introduction of additional independent variables.

#### **References:**

- Aderinoye R. and Ojokheta K. (2004). "Open-distance education as a mechanism for sustainable development: Reflections on the Nigerian experience", *Journal of International Review of Research in Open Distance Learning*, Vol. 5, No. 1, pp. 174-187.
- Daniels S. J. (2004). "The sustainable development of open and distance learning for sustainable development", Speech presented at the Commonwealth of Learning Institute, Strategies for Sustainable Open and Distance Learning, Sydney, British Columbia, Canada, June 09, 2004.
- DHET 2011/12-2014/15, Department of Higher Education. "Revised strategic plan", available online at: http://www.dhet.gov.za/LinkClick.aspx?fileticket=XfAHmalvQjw% 3d&tabid=352&mid=1174.
- Gergen K. (1997). "Constructivist epistemology", available online at: http://www.ucs.mun.ca /~emurphy/stemnet/cle2.html.

Healy J. F. (1999). Statistics: A Tool for Social Research (5th ed.), Halfway House: International Thompson Publishing.

IEASA n.d. International Education Association of South Africa. "South African higher education: Facts and figures", available online at: http://www.ieasa.studysa.org/ resources/Study\_SA /Facts\_Figures\_section.pdf.

Marope M. T. (2005). "Namibian human capital and knowledge development for economic growth with equity", Africa Region

Human Development Working Paper Series no. 84, The World Bank.

Menconi M. (2003). "Distance education: in search of a definition", Convergence, Vol. 36, No. 2, pp. 103-117.

National Treasury (2009). "Adjusted estimates of national expenditure", available online at: http://www.treasury.gov.za/documents/mtbps/2009/adjustments/National%20Treasury%20Ajusted%20Estimates.pdf.

National Treasury (2012). Budget 2012: Peoples Guide, Pretoria: Government Printers.

Nkongo-Nielson H. (n.d.) *The Contributions of Open and Distance Learning to National Development in Namibia*, Windhoek: Centre for External Studies.

Norusis M. J. (1998). SPSS 8.0: Guide to Data Analysis, Upper Saddle River: Simon & Schuster.

Pityana B. (2009). "Open distance learning in the developing world", in: The 23rd ICDE World Conference on Open Learning and Distance Education, 7-10 June 2009, Maastricht, the Netherlands.

South Africa (Republic) (1997). Higher Education Act, no. 101, Pretoria: Government Printer.

Stellenbosch University (2003). "Teaching management plan", available online at: http://www.sun.ac.za/university/policies/teachingmanagementplan.pdf.

UNISA (2009). "Annual report", available online at: http://www.unisa.ac.za/Default.asp? Cmd=ViewContentID=16451.

UNISA (2011). "Celebrating teaching and learning at UNISA", available online at: http://www.unisa.ac.za/media/PDFflips/teaching\_learning2011/September/files/1-t&1%20at%20unisa%20web.pdf.