Why many children are still out of school?

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ABSTRACT: The main purpose of this paper was to present a causal mechanism that would explain the phenomenon behind dropout among primary students. Using a Time Series design, the study analysed a nine-year series of multivariate data using advanced methodological methods such as factorial analysis, regression analysis, anomalous detection and path analysis the study specifically tried to identify relationships among and the variables and determine which factors are directly or indirectly linked to dropout. Results of the analyses showed that child labor was the strongest determinant of dropout while indirect factors were primary completion, enrolment, employment and government expenditure. Although GDP was not found to be a strong factor it appeared to have a direct impact on the other variables that influenced dropout. This may therefore imply that low economy could be the unseen phantom behind dropout radiating to an array of other factors. Child labor may just be an outward manifestation of a serious economic problem which, if not resolved could lead more children to the periphery; joining the ranks of child labor instead of learning inside the classroom.

KEYWORDS: Dropout, Child Labor, Unemployment, Primary Completion, Government, Expenditure, Enrolment, Multivariate Data Analysis.

1 INTRODUCTION

One of the greatest measures in the spectrum of government programs is investing on human capital [1], [2]. Well-trained human resource means greater productivity and an increased standard of living for all. Considering the children as the country's future manpower, any government wishing to maximize its potentials would capitalize highly on basic education [3].

Research shows that high quality primary care and education promote children's early learning and later success, assuring their families of economic stability [4], [5]. As a vital dimension of empowerment and poverty reduction, basic education holds a prominent place within the Millennium Development Goals (MDGs) [6].The Incheon Declaration 2015 accentuates the provision of 12 years of free inclusive, equitable quality primary and secondary education [7]. The same goal is reflected in the broadened Sustainable Development Goals (SDGs) that replaced the earlier narrowed MDGs in September 2015 [6]. Some countries are taking paradigm shifts in order to address education needs across multiple ages. India, for instance, is pooling its financial resources so that children with special needs can join the mainstream schools and adapt school environment. While resource centers are being established, the teachers are oriented on inclusive education. Viet Nam, Malaysia and the Philippines and some other countries in Asia have effected new policies on language of instruction to make learning more relevant especially for ethnic groups [8], [7].

However, there is a growing number of young children at risk of educational failure due to poverty and other factors [9]. Despite a long-term upward trend in school completion, recent surveys reveal that 1 out of 11 (or 9%) children of primary school age (typically 6 to 11 years) continue to be deprived of the right to education [7]. Data from the UNICEF and UIS (2015) reflect a decrease in enrolment in recent years. In 2013 alone, 124 million children and young adolescents (6-15 years) were never enrolled or have dropped out of school compared to 122 million in 2011. This shows an increase of 2.4 million in

a span of ten (10) years. Although there had been global campaigns and initiatives to reduce the gender gap and break the barriers of schooling, the 2013 survey found that 1 out of 10 girls and 1 out of 12 boys are still out of school [7].

Dropout is a major concern in any government policy because the cost of losing a student is equated to wasted time, effort and money [10]. The adverse effects of dropout can be manifested in varied aspects. From the outlook of efficiency, the steady rise in premature dropout could mean a rise in the number of dependents and liabilities [11]. It potentially weakens the country's productivity; thereby decreasing its ability to compete globally [12].With a higher dropout rate, the cost of having to meet the targeted proportion of the population who are supposed to be in school also rises.

Majority of dropouts lapse into illiteracy; hence, they are forced to consign to a future of low-income trajectory, ending up as slaves instead of masters; consumers instead of producers; and passive onlookers instead of active participants in their own communities. Losing the option to earn more, some of them resort to illegal means of livelihood and sometimes they end up in jail [13], [14], [15]. The prevalence of subservience among the less educated breeds abuse of power and authority from the educated sector which consequently leads to graft and corruption. Illiteracy then is reflected as a tool by which the less educated could literally be silenced.

Recent global data [8] reports that two reasons account for the declining rate of school completion. One is the difficulty of the sub-Saharan countries to keep up with the increasing demand for education due to its rapid population growth. Another is the devastating war in the Syrian Arab Republic causing many families to be dislodged from their homes; thus, increasing dropout rate from 0.3 million in 2012 to 1.8 million by the end of 2013**.**

In addition, the global aid to basic education has been noted to be steadily decreasing due to the expansion of the international agenda in education; thus, aid to education today is more focused on secondary and tertiary education and is shifting away from basic education [7]. This new drift can literally create a gap in the flow of early training.

There exist complementarities between aid for primary and secondary education [6]. When primary education fails to obtain sufficient financial support, and simultaneously supports secondary and higher education primary enrolment decreases [16]. This could be due to a negative effect that discourages children to complete primary schooling after losing prospects to continue at secondary level later.

1.1   THEORIES

The study is premised on the argument that while children aim to meet basic needs they seek to meet successively higher needs in the form of a pyramid [17]. Since the body's physiological needs are basic to human survival, it is assumed that when children are hungry they may prefer food to knowledge [18]. Until physiological needs are satisfied, no other motivating factors can arise [19].

Meanwhile, Bandura's Self-Efficacy Theory explains that children's beliefs in their own academic abilities determine how they perceive and approach goals, tasks and challenges [20], [21]. Children with a weak sense of self efficacy believe they cannot handle difficult learning tasks, so they tend to be avoidant ([20]). They focus on personal things and negative outcomes and quickly lose confidence. When confronted with dilemmas, quitting school becomes an easy option. On the other side, children with a strong sense of self-efficacy view problems as opportunities for growth, are more committed to their interests and quickly recover from setbacks and failures [22], [23].

Developing a strong sense of self-efficacy requires that teachers give opportunities for children to perform tasks successfully [24]. They need to see others succeed through sustained efforts so that they, too, can believe in success. Since the primary years hold the foundation for building a strong self-efficacy, the government ought to give its full support to basic education.

However, children would hardly advance very far if they were left to discover things on their own. Vygotsky's Zone of Proximal Development (ZPD) Theory [23] suggests that there is a great difference between what the child can do without help and what he can do with help. Children who grow up without scaffolding from parents or teachers are prone to leave school [15], [22].

1.2   THE PROBLEM

From among the countries identified by UNESCO as having the most number of dropouts, the Philippines ranked seventh and is known to have suffered a massive economic downfall in the period of 2000 to 2009, a time when the dropout rate was at its peak [7]. Determining the predicaments behind that episode would benefit educators, government leaders, teachers and parents in determining solutions to minimize the occurrence of dropout and sustain a strong primary education.

A plethora of studies have been previously conducted to determine the reasons for dropout using quantitative or qualitative or both methods, but very few, if any, have utilized multivariate data analysis in explaining this issue. [26]) affirm that multivariate techniques allow researchers to obtain a richer and more realistic picture of the phenomenon than by only looking into a single variable. They provide a powerful test of significance which establishes a higher degree of reliability compared to univariate methods. Thus, it attempts to answer the same question using a different route.

It is in this context that the study was conducted. It examined the relationships among the variables influencing dropout using factorial, regression and path analyses. It specifically looked into the relationship between dropout and the other variables as well as the factors that were directly or indirectly connected to dropout. Lastly, it sought to find whether government funding is enough to support basic education. The findings are helpful in providing new patterns that clarify issues on dropout; patterns which previous field studies may have overlooked or failed to generate.

2   METHODS

2.1   DESIGN

This is a Time Series design which utilized the annual Philippine data sets from the World Bank Data Bank of seven (7) variables with nine (9) observations each covering the period of 2001 to 2009 identified as follows: dropout rate as the dependent variable and GDP per capita, primary completion, and primary enrolment, government expenditure on education, employment rate and child labor as the independent variables. Certain constructs were likewise generated from the variables.

2.2   CONSTRUCTS

As applied in the study, dropout is conceptualized as a challenge in education; GDP per capita as economy; primary completion as achievement; primary enrolment as goal in education; government expenditure on education as support; employment rate as manpower or human resource; and child labor as a form of social injustice.

2.3   SAMPLING OF VARIABLES AND LIMITS OF THE STUDY

In selecting the variables, incidental sampling was utilized which means that the choice was based largely on the availability of data. In other words, the period before and after 2001 to 2009 did not indicate precise data sets for the eight variables. This lack of data is considered a limitation in the study- an issue that continues to hurt dropout efforts [27]. Table 1 below shows the list of variables and their corresponding observations.

Table 1. Data set for the dropout index

Period	Dropout	GDP Per Capita	Primary Completion	Primary Enrolment	Government Expenditure	Employment Rate	Child Labor
2001	592905.5	0.76	201.04	12759918	3.03	60.4	46.6
2002	568478	1.53	189.27	12826218	3.00	59.0	47.4
2003	552319.5	2.87	190.57	12970635	3.04	59.7	47.6
2004	592174.5	4.64	188.11	13017973	2.57	58.6	48.2
2005	647082	2.84	187.89	13083744	2.43	59.8	48.5
2006	757323	3.38	183.15	13006648	2.53	58.8	48.9
2007	778684.5	4.81	182.82	13145210	2.60	58.6	49.6
2008	768361	2.43	184.09	13411286	2.69	59.1	49.9
2009	734587.5	-0.52	182.68	13686643	2.65	59.3	50.3

2.4   DATA ANALYSIS

In answering the questions of the study, three (3) exploratory data analyses tools were applied: factorial analysis, regression analysis, and path analysis. Anomaly detection was conducted as an extended process of regression analysis. Below are brief descriptions of each model.

Factor analysis was used to examine correlations by grouping the variables in the study in factors so that the variables within each factor were more highly correlated with variables in that factor than with variables in other factors. It also

interpreted each factor according to the meaning of the variables. Each group of variables then pointed to a single underlying construct that was responsible for the observed correlations [28].

Using standardized data, *regression analysis* was performed to determine the relationship between the identified independent or predictor variables (i.e., GDP, primary completion, enrolment, government expenditure, employment and child labor) and a dependent variable (dropout) with the prior assumption that the development outcome (y=dropout) is related to a set of explanatory or independent predictors (x1, x2,…xp = GDP, primary completion, enrolment, government expenditure, employment and child labor). In regression outputs, there is a process called *anomaly detection* which explains unusual observations called 'anomalies'; meaning they do not belong to the group and are considered to be good sources of new theories or explanations of certain phenomena or events [29], [30].

To test the fit of the correlation matrix against two or more causal models which are being compared in this study or to find which variables were directly or indirectly linked to dropout, an extension of the process of regression called *Path Analysis* was conducted [31]. This is usually depicted in a circle-and-arrow figure in which single-headed arrows indicate causation. A regression was done for each variable in the model as a dependent variable on others which the model indicated were causes [32].

3   RESULTS AND DISCUSSION

This section presents the significant findings of the study, the tables and figures representing the results of the analyses, the interpretations as well as the implications.

1) WHAT RELATIONSHIPS EXIST AMONG THE INDICES OF DROPOUT?

3.1   FACTORIAL ANALYSIS

Through factorial analysis, the variables were categorized as factors 1 and 2. The grouping hinged on which of the two loadings or correlation coefficients of the variable was higher. For loadings (Figure 8) that were higher on factor 1 (i.e., dropout, GDP per capita, primary enrolment and child labor the variables went to factor 1, while those that were higher on factor 2 such as parental employment, government expenditure and primary completion went to factor 2). The interrelationships existing among the variables were used as bases for labelling each of the two factors. Factor 1 was labelled external environment factors since GDP per capita and child labor are socio-economic factors that are closely linked to dropout and primary enrolment. Factor 2 was named educational support because parental employment and government expenditure are supporting elements that may influence primary completion. Thus, it can be said that dropout is influenced by two major indices- external environment factors and educational support.

Table 2. Factorial analysis output

Variable	Factor 1	Factor 2	Communality
Dropout	**0.858 ***	-0.169	0.766
GDP Per Capita	**0.274 ***	0.912	0.906
Primary Completion	-0.946	**-0.066 ****	0.900
Primary Enrolment	**0.765 ***	-0.580	0.920
Government Expenditure	-0.780	**-0.211 ****	0.652
Employment	-0.697	**-0.529 ****	0.766
Child Labor	**0.956 ***	-0.269	0.987
Variance	4.3006	1.5970	5.8976
%Variation	0.614	0.228	0.843

Higher Loading for Factor 1- *   Higher Loading for Factor 2- **

3.2 FACTOR LOADINGS

The loading plot below shows the extent of correlation among the variables. As shown in Figure 1, the four lines going to the right direction represent the variables that lean more to factor 1 while the lines of the three variables going to the left direction incline towards factor 2. Taking a closer look at dropout and child labor, the lines are going to the same direction and a narrow gap exists between them. This means that the two variables are highly and significantly correlated with each other. The result signifies that when child labor is high, dropout will also be high.

Another striking observation is that primary enrolment is also related to child labor, suggesting that if child labor is high, enrolment could also be high. Despite the wider gap between the two variables this occurrence is greatly possible because children who are engaged in child labor could suffer much emotional stress and fatigue [33]. For this reason, they may be driven to pursue education to break the pattern and avoid continuous hard labor in the future. Then when they are in school, the overwhelming pressures will likely push them out of school.

Meanwhile, GDP per capita was found to be related to child labor, dropout and enrolment but the correlation was inverse and less significant (r = 0.276). This denotes that when GDP per capita is low, dropout, child labor and enrolment are high. This result could mean that a country's low income may drive more families towards the poverty line; thereby creating a gap between home and school opportunities ([34], ([35]), [36], [37]).
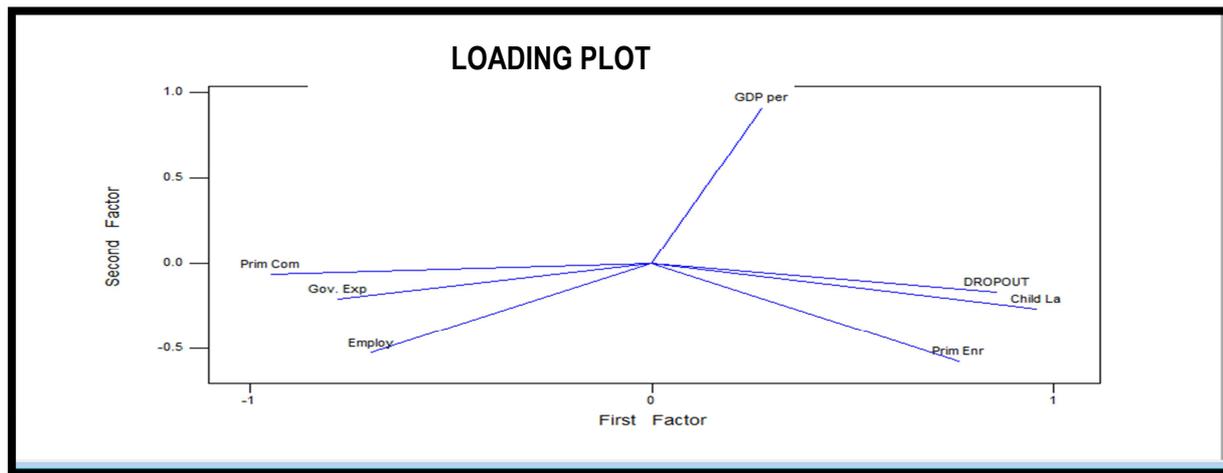
Figure 1. The factor loadings of the variables

As regards the educational support factors, findings revealed that primary completion and government expenditure are closely related to each other and suggest that when government expenditure is low, primary completion is also low. When schools experience shortage of classrooms, inadequacy of materials, poor infrastructure, facilities and equipment, children may lose the enthusiasm to stay in school.

Employment was likewise found to be related to primary completion. This means that when employment is low, primary completion is also low. It puts forward the idea that when parents are financially hard up, children may have the tendency to stop schooling. This result is consistent with the findings in the studies conducted earlier ([38], [39], [40]).

The whole concept is illustrated in the schema below (Figure 2) showing the interplay among the variables under each factor. The diagram implies that dropout is a function of both external environment and educational support factors. It proposes that the growth or decline of these variables correspondingly determine the direction of dropout.
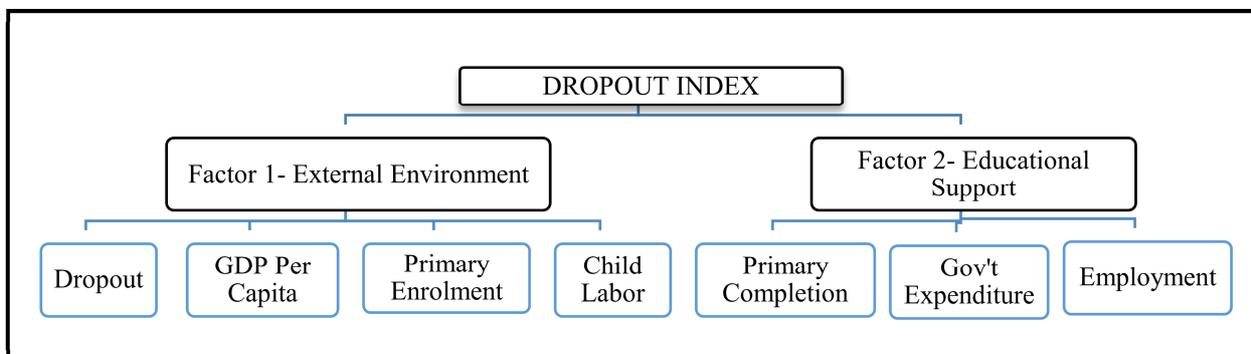

Figure 2. The Indices of Dropout

2) WHAT RELATIONSHIPS EXIST BETWEEN DROPOUT AND THE OTHER VARIABLES?

3.3 REGRESSION ANALYSIS

Figure 3 presents the results of the regression analysis in finding the relationship between the identified independent or predictor variables (i.e., GDP, primary completion, enrolment, government expenditure, employment and child labor) and a dependent variable (dropout) with the prior assumption that dropout is highly related to the aforementioned predictor variables. Results show that child labor has a highly significant correlation with dropout ($p=0.023$) denoting that when dropout is high, child labor is also high.

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std dropout = 0.0000 - 0.316 std gdp + 0.706 std prim com -
            + 0.029 std govt expd + 0.065 std emp + 3.24 std

Predictor          Coef       SE Coef           T         P
Constant        0.00000       0.08945        0.00     1.000
std gdp         -0.3163        0.1696       -1.87     0.203
std prim         0.7061        0.3219        2.19     0.160
std enro        -1.8621        0.3829       -4.86     0.040
std govt         0.0289        0.1520        0.19     0.867
std emp          0.0650        0.1976        0.33     0.774
std chil         3.2427        0.5046        6.43     0.023

S = 0.2683       R-Sq = 98.2%      R-Sq(adj) = 92.8%
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Figure 3. Regression analysis output

This result validates the same output from the factorial analysis presented earlier. A moderately significant correlation was likewise found between dropout and enrolment (p=0.40) indicating that when enrolment is low, dropout is high (β= -1.8621). This means that only few children participated in school because they were out working to help their families. So far, only those two variables were directly related to dropout.

An important note in the study is that in computing the regression coefficients the "lag system" was utilized. This is premised on the idea it usually takes some time before the effect of the rise or fall of a certain variable would manifest. For instance, when employment declines in a particular year, its effect does not happen immediately in that same year. It takes about a year for the effect to be visible. Therefore, in the computation of the regression coefficients, only the response observations in the year following the cause variables were included.

In obtaining the regression between dropout (response variable) and child labor (cause variable), for instance, the data for child labor was delayed for a year. There were 9 observations for every variable, so, for the dependent variable-dropout, only observations 2 to 9 were included while for all the independent or predictor variables the computation of observations started from observations 1 to 8 symbolic of the concept that for example, the annual dropout rate is an effect of the previous year's GDP per capita, employment or other independent variables.

3) WHICH AMONG THE VARIABLES ARE DIRECTLY LINKED TO DROPOUT?

3.4   PATH ANALYSIS

To obtain a clearer grasp of the proximity of correlations among the variables, the pairwise comparison of regressions were plotted in Table 3 along with corresponding interpretations. This table was also used as a guide in conducting a path analysis.

Table 3. Pairwise Comparison of Variables

Response	Predictor	Reg. Coefficients	Interpretations
dropout	Child labor	1.08**	High child labor, High dropout,
dropout	Gov't expend	-0.61	Low gov't expenditure, high dropout
dropout	Employment	-0.26*	Low employment, high dropout
dropout	enrolment	0.54*	High enrolment, high dropout
dropout	Prim comp	-0.72*	Low prim comp, high dropout
dropout	GDP	0.01	High GDP, High Dropout
Child labor	Gov't expend	-0.40*	Low gov't expenditure, high child labor
Child labor	Employment	-0.57	Low employment, high child labor
Child labor	GDP	0.04	High GDP, High Child labor
Gov't Expenditu	GDP	-0.41	High GDP, low gov't expenditure
employment	GDP	-0.57	High GDP, low employment
Enrolment	GDP	-0.29	Low enrolment, high GDP
Enrolment	Employment	-0.24	Low employment, high enrolment
Prim. Completion		0.70**	High employment, high prim. completion

*Significant- *   Highly significant - ***

Table 3 reveals that child labor and primary dropout are highly and positively correlated with each other. This result coincides with the findings in the regression analysis previously done. Other consistent correlations were found among dropout and the variables - employment, enrolment and primary completion. Child labor and government expenditure were similarly found to have significant correlations as well as primary completion and employment.

3.5   PATH ANALYSIS OUTPUT

Meanwhile, Figure 4 below describes the paths which the causal or predictor variables take before they reach the response or dependent variable. As applied in the study it describes which among the independent variables directly or indirectly influence dropout.
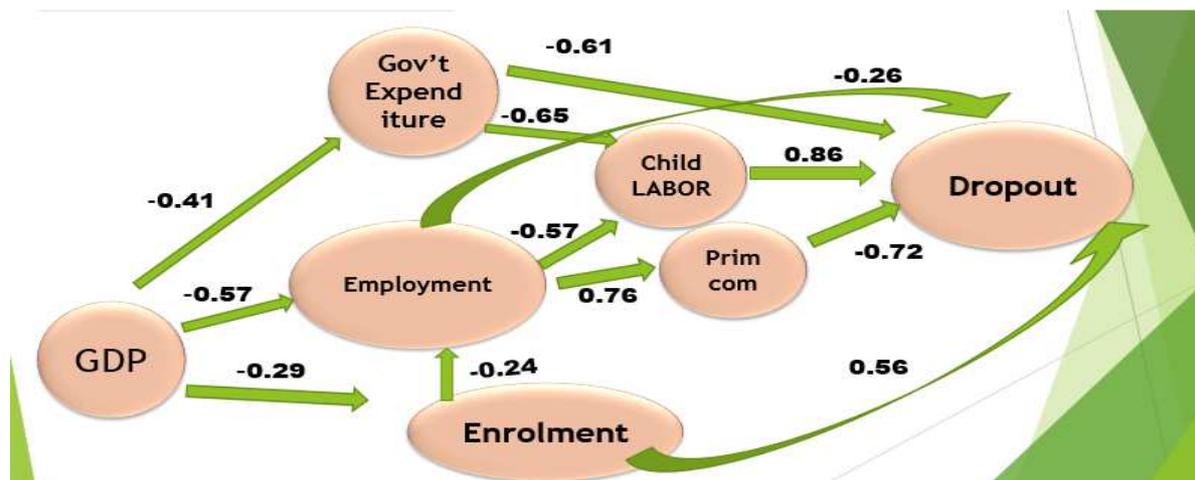

Figure 4. Path analysis showing the extent of correlations among the variables

The path analysis (Figure 4) reveals that child labor and dropout obtained the highest and positive regression coefficient of +0.86. The result implies that child labor has a direct influence on dropout supporting an earlier finding that claims poverty as a major reason many children leave school. Most of the children want to help their families by seeking employment [39]. Primary completion and dropout were also found to be related to each other. The regression coefficient

of -0.72 implies that when many children are unable to finish basic education, they are most likely to end up in child labor. It could also be that children who are engaged in child labor are inclined to leave school too soon.

Employment was also found to have a direct effect on dropout (-0.26) indicating that when employment is low, dropout is high. It elucidates further that when parents are incapable of providing the basic needs of the family, children would instinctively look for work to augment their parents' income [41]. Another finding specifies that employment has a direct, positive effect on primary completion suggesting that when employment is high, the number of children who finish basic education is also high.

Government expenditure was found to have a direct effect on dropout as indicated by its negative regression coefficient (-0.61). This result explains that when government support is low, dropout is high. Thus the decline in government support could result in the shortage of classrooms, materials and qualified teachers. Both cognitive and non-cognitive factors play a crucial role in sustaining children's interest in their studies; thus, with poor learning environment, children may lose interest and the motivation to learn [42], [43].

A negative but direct correlation was found between enrolment and dropout. It suggests that when enrolment is high, dropout is high (r = 0.54). Ordinarily, when dropout is high, we can expect enrolment to be low but this context could be explained by the fact that children may still enrol even if they are working. While engaged in hard labor, they realize that the only way to end hard labor is to finish schooling ([39]). Their enthusiasm dims as they juggle between school and work where in the end, dropout becomes the last option.

4) IS GOVERNMENT FUNDING ENOUGH TO SUSTAIN BASIC EDUCATION?

To answer this question, the correlations among GDP, government expenditure, employment and enrolment were analyzed. The path analysis (see Figure 10) indicates that GDP has an indirect effect on dropout as its path goes through employment, enrolment and government expenditure first before going to primary completion and dropout. Reference [44] reported that despite the decrease in GDP through the years, the budget for basic education has actually increased by 25% from 2000 (Php 80 M) to 2009 (150 M). But then, the real value of per capita cost has decreased from Php 6,000 to Php 4,000 in 2009. This implies that there had been more students accommodated by the public schools than could be given adequate financial support.

4 CONCLUSION

Overall, the main impact of this study was to explain the phenomenon on primary dropout using the lenses of advanced methodological analyses. Through the various exploratory findings the study was able to establish a solid basis for pointing to child labor as the main factor behind dropout in the Philippines. Although GDP was not found to be directly linked to dropout it bore a direct influence on the other variables that lead to child labor such as employment, government expenditure and enrolment. Low economy can reduce educational support and employment rate. The inability of low-income, low-skilled parents to support the family drives many children out of school to seek early employment. Considering that they are young, juggling their time to meet the demands of both school and work would in the end take them to a crossroad.

Maslow (2000) emphasized that unless the physiological needs are met, no other needs including the need for education would arise. This creates a cycle where dropouts find low-paying jobs, get married and bear children who could likewise be potential dropouts in the future [45]. The current findings confirm results from previous studies implicitly pointing to a country's low economy as a silent, powerful force leading to dropout [39], [46], [38]. This implies that child labor may just be an outward manifestation of a serious economic problem which, if not resolved could push children towards and beyond the periphery, joining the ranks of child labor instead of learning inside the classroom.

REFERENCES

[1] E.A. Hanushek and D.D. Kimko, "Schooling, Labor-force quality, and the Growth of Nations," *American Economic Review*, vol 1, pp. 184-208, 2000.

[2] R.W. Rumberger RW, "Why Students Drop out of School and What can be Done," a paper presented in a conference entitled, *Dropouts in America: How Severe is the Problem?,* Harvard University, January 13, 2001.

[3] K. Hupfeld K, "Resiliency Skills and Dropout Prevention: A Review of the Literature," vol. 1, 2007.

[4] R.L. Coley, C.M. Lombardi and J Sims, "Long-term Implications of Early education and Care Programs for Australian Children, *Journal of Educational Psychology*, vol. 107, no. 1, p. 284, 2015.

[5] E. Dearing, K. McCartney and B.A. Taylor, "Does Higher Quality Early Child Care Promote Low-Income Children's Math And Reading Achievement In Middle Childhood?" *Child Development*, vol. 80, no. 5, pp. 1329-1349, 2009.

[6] K. Birchler and K. Michaelowa, "Making Aid Work for Education In Developing Countries: An Analysis Of Aid Effectiveness For Primary Education Coverage And Quality," *International Journal of Educational Development*, 2015

[7] UNESCO, "Fact Sheet 31, Paper 22," *UNESCO Global Monitoring Report*, 2015.

[8] UNESCO Institute for Statistics (UIS) and United Nations Children's Fund (UNICEF) , Fixing the Broken Promise of Education for All: Findings from the Global   Initiative on Out-of-School Children. Montreal: UIS, 2015. [Online] Available: http://on.unesco.org/oosci-global (March 2, 2016)

[9] J. Currie, "Early Childhood Education Programs," *Journal of Economic Perspectives*, vol. 15, no. 2,pp. 213-238, 2001.

[10] E. Fernandez, D. Salem, J.K. Swift and N. Ramtahal, "Meta-Analysis of Dropout From Cognitive Behavioral Therapy: Magnitude, Timing, and Moderators," *Journal of Consulting and Clinical Psychology,* vol. 83, no. 6, p. 1108, 2015.

[11] C. David , J.R.G. Albert, and S.C. Monterola SC, "In Pursuit of Sex Parity: Are Girls Becoming More Educated Than Boys? Policy Notes PN2009-005.Manila," *Philippine Institute for Development Studies*, 2009.

[12] Policy Brief No. 4 , "The Filipino Child: Global Study *O*n Child Poverty And Disparities," 2014.

[13] D.M. Anderson, "In School And Out Of Trouble? The Minimum Dropout Age And Juvenile Crime," *Review of Economics and Statistics*, vol. 96, no. 2, pp. 318-331, 2014.

[14] E. Hanushek , V. Lavy and K. Hitomi, " Do Students Care About School Quality? Determinants of Dropout Behaviour in Developing Countries," *NBER Working Paper 12737. Cambridge, Massachusetts: National Bureau of Economic Research*, 2006.

[15] P.A. Willging and S.D. Johnson, "Factors that Influence Students' Decision To Drop out of Online Courses,"*Journal of Asynchronous Learning Networks*, vol. 8, no. 4, 2004.

[16] S. Barakat, D. Connolly, F. Hardman and V. Sundaram, "The Role Of Basic Education In Post-Conflict Recovery," *Comparative Education*, vol. 49, no. 2, pp. 124-142, 2013.

[17] A.H. Maslow, " A Theory of Human Motivation," *Psychological Review*, vol. 50, pp. 370-396, 2000.

[18] D.M. Brookman, "Maslow's Hierarchy and Student Retention. *NACADA Journal,* vol. 9, no. 1, pp. 69-74, 1989.

[19] R.J. Zalenski and R. Raspa, "Maslow's Hierarchy of Needs: A Framework for Achieving Human Potential in Hospice,"*Journal of Palliative Medicine*, vol. 9, no. 5, pp. 1120-1127, 2006.

[20] A. Bandura, "Self-efficacy: Toward A Unifying Theory of Behavioral Change," *Psychological Review*, vol. 84, pp. 191-215, 1977.

[21] A. Bandura, N.E. Adams, "Analysis of Self-Efficacy Theory of Behavioral Change," *Cognitive Therapy and Research*, vol. 1, no. 4, pp. 287-310, 1977.

[22] Bandura, A., *Self-efficacy*, In V. S. Ramachaudran (Ed.), Encyclopedia of human behavior,4 New York: Academic Press. 71-81, 1994.

[23] B.J. Zimmerman, "Self-efficacy: An Essential Motive to Learn," *Contemporary Educational Psychology*, vol. 25, no. 1, pp. 82-91, 2000.

[24] Bandura, A., *Exercise of personal agency through the self-efficacy mechanisms*. In Schwarzer, R. (Ed.) Self-efficacy: Thought control of action. Washington, DC: Hemisphere, 1992.

[25] V. Khalkhali, R. Sharifi and A. Nikyar, "Students' Intentions to Persist in, Versus Dropout of High School: What Self-determined Motivation Tells Us about It,"*International Online Journal of Educational Sciences*, vol. 5, no. 2, pp. 282-290, 2013.

[26] Vygotsky, L.S. *Thought and language*, Trans. Eds. Hanfmann and G. Vakar. Cambridge: MIT Press, 1934.

[27] T.A.B. Snijders and R.J. Bosker, "Multilevel Analysis: An Introduction to Basic and Advanced Multilevel Modeling, " *The Indian Journal of Statistics*, Series B, vol. 61, pp. 71-90, 1999.

[28] C. Samuels, "Lack of Research, Data Hurts Dropout Efforts, Experts Say,' *Education,* vol. 1, 2007.

[29] Child, D, *The Essentials of Factor Analysis* (3rd ed.). Continuum International. ISBN 978-0-8264-8000-2,2006

[30] Fox, J, *Applied Regression Analysis, Linear Models and Related Methods*, Sage, 1997.

[31] Hazewinkel, M. (ed.) *Regression Analysis*, Encyclopedia of Mathematics, Springer,ISBN 978-1-55608-010-4 Denver: ScholarCentric, 2001

[32] S. Wright S, "Correlation and Causation", *Journal of Agricultural Research*, vol. 20, pp. 557–585, 1921.

[33] Dodge Y., *The Oxford Dictionary of Statistical Terms.* OUP. ISBN 0-19-920613-9, 2003.

[34] A. Bandara, R. Dehejia and S. Lavie-Rouse S, "The Impact Of Income And Income Shocks On Child Labor: Evidence From A Panel Survey Of Tanzania," *World Development*, vol. 67, pp. 218-237, 2015.

[35] J.L. Mahoney and R.B. Cairns, "Do Extracurricular Activities Protect Against Early School Dropout? *Developmental Psychology*, vol. 33, no. 2, pp. 241-253, 1997.

[36] C. Finnan and G. Chasin, "Accelerating The Learning of Low-Achieving Students: The Transformation of a Dropout, " *Phi Delta Kappan*, vol. 88, pp. 625-629, 2007.

[37] Fox, J., *Applied Regression Analysis, Linear Models and Related Methods*. Sage, 1997.

[38] C.I. Sobritchea,"The Ideology Of Female Domesticity: Its Impact On The States Of Filipino Women. *Review of Women's Studies,* vol. 1, pp. 26-41, 1990.

[39] S. Suh, J. Suh and I. Houston, "Predictors of Categorical At-Risk High School Dropouts," *Journal of Counselling and Development*, vol. 85, pp. 196-203, 2007.

[40] R.B. Cairns, B.D. Cairns and H.J. Neckerman, "Early School Dropout: Configurations And Determinants, "*Child Development*, vol. 60, no. 6, pp. 1437-1452, 1989.

[41] J.G. Nava, "Factors in School Leaving: Variations Across Gender Groups, School Levels and Locations," *Education Quarterly*, vol. 67, no. 1, pp. 62-78. Week: 26,8, 2009.

[42] P. E. Barton, "The Dropout Problems: Losing Ground, " *Educational Leadership*, vol. 63, no. 5, pp. 14-18, 2007.

[43] McPartland, J., *Dropout prevention in theory and practice*. In R Rossi (Ed.). Schools and at risk: Context and framework for positive change. New York: Teachers College, 1994.

[44] F. L. Jocano, "Social Organization In Three Philippine Villages: An Exploration In Rural Anthropology. Manila: Centro Escolar University Research and Development Center, 1998.

[45] Tottenham, N., *The importance of early experiences for neuro-affective development*, In The Neurobiology of childhood. Springer Berlin Heidelberg, 109-129, 2014.

[46] Department of Education, *Fact Sheet: Basic education statistics*," Pasig: Department of Education, vol. 31, 2009.

[47] N. Branson, C. Hofmeyr and D. Lam, "Progress Through School And The Determinants of School Dropout In South Africa, *Development Southern Africa*, vol. 3, no. 1, pp. 106-126, 2014.

[48] M.C. Jukes, C.M. Jere and P. Pridmore, "Evaluating the Provision of Flexible Learning for Children At Risk of Primary School Dropout in Malawi," *International Journal of Educational Development,* vol. 39, pp. 181-192, 2014.