

An Empirical Investigation of the Effect of Technology Transfer by MNC on the Economic Development of Cameroon.

Susannash Limunga Esowe

*Assistant Lecturer, Department of International Economics,
IRIC/University of Yaounde 2.*

Abstract

Supporters of globalization claimed that it has contributed significantly to the inflow of foreign capital from advanced to developing countries through the activities of Multinational corporations (MNCs), and has created an avenue for technological transfer. This work set out to investigate the effect of the transfer of technology by MNC on the economic development of Cameroon. It makes use of the Ex post facto research design and secondary data for 42years (1977 – 2019) from the Global Economic and World Development Indicators data sets. The multiple regression was used to analyse the results. The independent variable, technological transfer was captured using communication, computer (percentage of service import, BOP) while the dependent variable Economic development was captured with a use of a more comprehensive indicator the Human Development Index (HDI). The Result showed that technological transfer has a direct and positive effect on the economic development of Cameroon. From these findings, we recommend the sustainable transfer of technology to Cameroon.

Keywords: *Technology Transfer, Multinational Cooperation, Economic Development*

Date of Submission: 25-07-2022

Date of Acceptance: 06-08-2022

I. INTRODUCTION

One of the most heated issues within current development debates relates to the role played by multinational corporations (MNCs) in economic development. MNCs may help emerging economies in the modernization of their economies and industries by transferring technology, know-how and skills, by providing access to export markets, by intensifying competition, or by making available goods and services that are better and/or cheaper than those offered by local producers (JBIC Institute, 2002) cited in (Eric and Michael,2011). The experiences of some successful countries in rapid economic and industrial development show that the acquisition of a significant amount of foreign technology has played a crucial role (Hamid, 2001). Supporters of globalization claimed that it has contributed significantly to the inflow of foreign capital from advanced to developing countries through the activities of Multinational corporations (MNCs), and has created an avenue for technological transfer (Forgha et al., 2016). Many developed countries have adopted measures that directly or indirectly facilitate technology transfer. These measures include financing support, training, matching services, partnerships and alliances and support for equipment purchase or licensing (UN, 2004). The United Nation Conference for Trade and Development (UNCTAD) surveyed 41 agencies and programmes in 23 developed countries that offer home-country measures (HCMs), in one way or another, facilitating technology transfer. Nineteen of the agencies surveyed provided support for training programmes. Fifteen of the agencies surveyed provided FDI-related technology transfer incentives to their enterprises while seven of the agencies surveyed provided financing for technology transfer (UN, 2004).

Transferring technology from the developed to the developing countries is an obvious alternative which aids with the promotion of both economic development and international peace (Hamid, 2001). Technology transfer is the movement of data, designs, inventions, materials, software, technical knowledge or trade secrets from one organisation to another or from one purpose to another. The technology transfer process is guided by the policies, procedures and values of each organisation involved in the process (Granta and Great, 2021). Economic development on the other hand is a concerted effort on the part of the responsible governing body in a county to influence the direction of private sector investment toward opportunities that can lead to sustained economic growth. Sustained economic growth can provide sufficient incomes for the local labour force, profitable business opportunities for employers and tax revenues for maintaining an infrastructure to support this continued growth (California Association for Local Economic Development, 2020).

Economic development is the process by which emerging economies become advanced economies. In other words, it is the process by which countries with low living standards become nations with high living standards. Economic development also refers to the process by which the overall health, well-being, and academic level the general population improves (Market Business News, 2021). During development, there is a population shift from agriculture to industry, and then to services. Economic development is all about improving living standards. 'Improved living standards' refers to higher levels of education and literacy, workers' income, health, and lifespan (Market Business News, 2021). Although the terms economic development and economic growth cover similar concepts, they are not the same. Economic growth is all about expanding GDP, i.e., making the size of the economy bigger while Development, on the other hand, looks at a much wider range of statistic than simply GDP or GDP per capita. Economic development looks at how the citizens of a country are affected. Apart from their living standards, it also looks at the freedom they have to enjoy those living standards. Economic development takes into account the following information: Average life expectancy; Education standards; Literacy rates; Environmental standards; Availability of housing, plus the quality of housing; Access to healthcare and Income per capita. Economic growth is a crucial condition for development. However, just growth is not enough because it cannot guarantee development (Market Business News, 2021). It is therefore important for every country to seek economic development than just growth. Countries are seeking thousands of ways to attain economic development. Amongst the method opted for is the importation of technology from MNC. This study thus seeks to investigate the effect of these technology transfers by MNC on the economic development of Cameroon.

II. LITERATURE REVIEW

A number of studies have directly and indirectly investigated the effect of technology transfers by MNC on the economic development of Cameroon in particular and less developed countries as a whole. Amongst them is the work of Hoffmann (1985) investigating the transfer of technology to developing countries concluded that although both the industrialized countries and the developing countries have an economic interest in the transfer of technology, there is a considerable amount of disagreement as to how the gains from the transfer should be apportioned. According to United Nations (2004), the existing home-country programmes are fragmented, insufficient and narrow in coverage. They specified that to attain sustainable economic development in developing economies, there is still a vast scope for further efforts. Such efforts may include assistance to developing countries to improve technical standards and certification systems, mobilization of "business angels" and involvement of developing country firms in complex projects. To the UN, some countries may also reserve a portion of their technical assistance budget to developing countries to support measures facilitating technology transfer to small businesses, especially in LDCs.

To Omer et al. (2012) technology has a great effect on productivity, wealth, health and life style of individuals and countries. Kingsly (2016) explored business strategies and policies put in place by multinational corporations to alleviate poverty in Africa with specific examples from Cameroon. They concluded that though the principal goal of MNCs is profit maximization, corporations are making an effort to see that the poor benefit from the activities of these giant companies. Forgha et al., (2016) examined the effects of the activities of multinational corporations on the economic growth of Cameroon using secondary data collected from 1975 - 2015 and Two-Stage Least Squares Estimation Technique. From their results, they concluded that, the contribution of MNCs to economic growth was enhanced by its interaction with the level of infrastructural development, return on investment and political stability in the host country.

To Przemyslaw et al., (2017), technology transfer-related policies are grouped into six categories: 1) absorptive capacity policies; 2) measures related to intellectual property rights (IPR); 3) Foreign Direct Investment(FDI) promotion measures; 4) FDI restrictions and FDI screening; 5) performance requirements; and 6) investment incentives. Their findings from literature showed that technology transfer increased market competitiveness. Maha et al., (2021) investigated the relationship between foreign direct investment, technological innovation, and economic growth of the Egyptian economy during the period 1990–2019 using the autoregressive distributed lag model. They found a positive significant relationship between the variables of incoming foreign direct investment and share of total capital formation in economic growth.

III. METHODOLOGY

This work uses the ex post facto research design because the events captured by the economic variables have already occurred and we cannot alter them in any way. This work makes use of secondary data collected for 42years (1977 – 2019) from the Global economic data set and world development indicators. The independent variable, technological transfer was captured using communication, computer etc (percentage of service import, BOP). The dependent variable Economic development was captured with a use of a more comprehensive indicated the Human Development Index (HDI). The HDI is a combination of longevity, education and GDP per capita of a country. This measure is more suitable with the definition of the quality and

quantity of life brought by economic development. Literature has proven that the economic development of a country can results from the technology from MNC. Given this relationship a regression analysis is a reliable method of identifying which other factors apart from technology transfer has an impact on economic development. The regression model most suitable for this analysis is the multiple regression analysis and not simple regression. this is because it incorporates multiple independent variables. Each independent variable in the, multiple regression has its own coefficient to ensure each variable is weighted appropriately. So, we can depict how each variable impact on economic development. The choices of the variables included in the models were based mostly on empirical, as well as, theoretical considerations. Various statistical tools have been used to analyses data in this work such as the descriptive statistics, correlation, unit root test and multiple regressions. The technology transfer and economic development models are specified as follows:

Economic development Model (With HDI as a proxy for Economic development)

$$hdi_t = \beta_0 + \beta_1 \log bopt + \beta_2 \log HHCt + \beta_3 \log exp + \beta_4 \log imp + \beta_5 \log govex + \beta_6 \log prin + \beta_7 \log Cl + \beta_8 \log capint + \mu_t \dots \dots \dots (1)$$

Where $\beta_0 \neq 0, \beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7$ and $\beta_8 > 0$

Where

- hdi_t = human development index which is used as a proxy for Economic development (dependent variable)
- $lbop$ = Communications, computer etc ((% of service imports, BoP) used as a proxy for technology transfer,
- HHC = Household consumption, billion USD
- exp = Exports of goods and services, billion USD
- imp = Imports of goods and services, billion USD
- $govex$ = Government spending, billion USD
- $prin$ = Political rights index, 7 (weak) - 1 (strong)
- cl = Civil liberties index, 7 (weak) - 1 (strong)
- $Lcapint$ = Capital investment, billion USD

IV. RESULTS

This work set out to investigate the effect of the transfer of technology by MNC on the economic development of Cameroon. This paper presents the result of summary statistics on table 1.

Table 1: Summary statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
lbop	43	3.637769	.2762264	3.016035	4.152881
lhhc	43	2.252361	.6416022	.7747272	3.321071
lexp	43	1.172372	.6072417	-.1743534	2.166765
limp	43	1.228258	.6732396	-.0618754	2.355178
lgovexp	43	.4388926	.6821757	-1.108663	1.458615
lprin	43	1.813269	.0540459	1.791759	1.94591
lcl	43	1.765009	.08204	1.609438	1.94591
lhdi	43	-.7692038	.1072835	-1.049496	-.5744756
lcapint	43	1.138712	.6085671	-.040822	2.177022

Source: Computed by the author (2022) using stata 14.

The table 1 presents the summary statistics of the variables used in this study. $lbop$ (Technology transfer) has a mean of 3.63 and a minimum and maximum value if 3.01 and 4.152 with a standard deviation of 0.276. Also, $lhhc$ (Household consumption) has a mean, minimum and maximum values of 2.252361, 0.7747272 and 3.321071 respectively. The variable $lexp$ (Exports of goods and services) has an average value of 1.172372 and a minimum and maximum value of -0.1743534 and 2.166765 correspondingly with a standard deviation value of 0.6072417. Again, $limp$ (Imports of goods and services) has an average value of 1.228258 with a lowest value of -0.0618754 and a highest value of 2.355178 with a standard deviation of 0.6732396. Similarly, $Lgovex$ (Government spending) has a mean, minimum, standard deviation and maximum values of 0.4388926, 0.6821757, -1.108663 and 1.458615 separately. Furthermore, $Lprin$ (Political rights index) has values 1.813269, 1.791759, 1.94591 and .0540459 which shows the average, the lowest, highest and standard deviation values correspondingly. The values 1.138712 (mean), 0.6085671 (standard deviation), minimum (-0.040822) and a maximum (2.177022) are for the variable $Lcapint$ (Capital investment). lastly, the variable human development index used as a proxy for economic development has an average value of -

0.7692038 and the lowest value is -1.049496 and highest value of -0.5744756 with a standard deviation of 0.1072835. Looking at the standard deviation of all the variables it shows that they are low which shows that there are closer to the mean thus suitable to use for Multiple regression analysis. Figure 1 show the trend of the variables used in this study over time. The HDI have been constantly stable and on a low trend in Cameroon over the years. Import has been on a drastic height over the years.

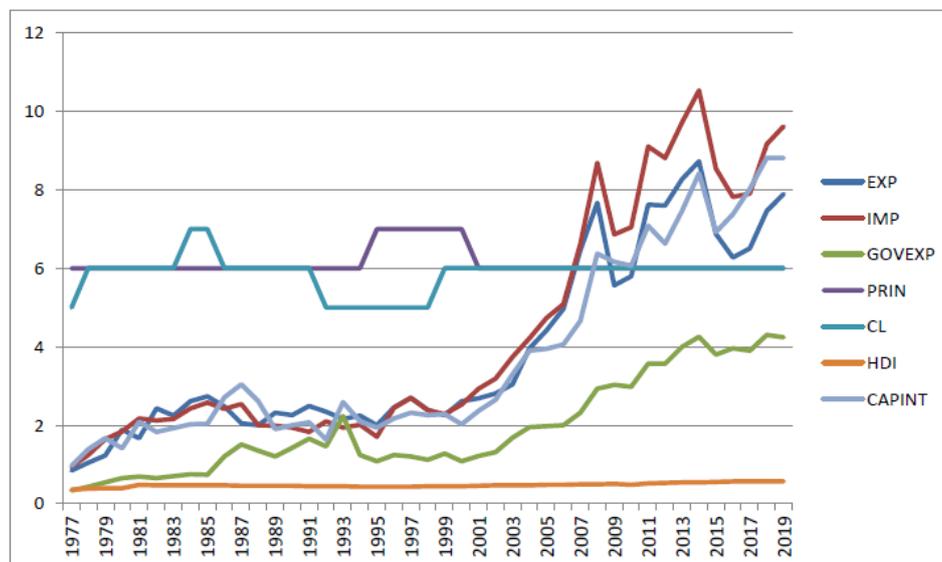


Figure 1 Trend of the Variables

The data used for the study is a time series data thus it is necessary to check for its stationarity. That is making sure the data has a particular trend adequate for regression analysis. This is established with the Phillip Peron (PP) test on table 2.

Table2: Unit root test

Variables	Adjusted t-value (1%)	p-value (1%)	Difference	Conclusion
lbop = Communications, computer	-3.208	-3.634	I(0)	Stationary
lhhc = Household consumption	-1.693	-3.634	I(0)	Stationary
lexp = Exports of goods and services	-1.747	-3.634	I(0)	Stationary
limp = Imports of goods and services	-1.210	-3.634	I(0)	Stationary
Lgovex = Government spending, billion USD	-1.853	-3.634	I(0)	Stationary
Lprin = Political rights index	-2.258	-3.634	I(0)	Stationary
lcl = Civil liberties index	-3.634	-3.634	I(0)	Stationary
Lhdi= human development index	-2.060	-3.634	I(0)	Stationary
Lcapint = Capital investment	-1.096	-3.634	I(0)	Stationary

Source: Computed by the author (2022) using stata. 14

The stationarity of the data ensures non spurious results to enable appropriate policy recommendations. The null hypothesis (H_0) states that if the adjusted T value is greater than the P-value then the variable is not stationary. While the alternative hypothesis (H_1) states that when the T- value is lower than the P-value then the variable is stationary. From the results on table 1, all the variables are stationary at level. Technology transfer(lbop) for instance has as T-value -3.208 which is lower than the P-value of -3.634 and so the variable is stationary at level I (0). This implies we reject the null hypothesis and accept the alternative that the variable is stationary. Results are further presented using regression analysis on table 3.

Table 3: Correlation Matrix of the Variables

	lbop	lhhc	lexp	limp	lgovexp	lprin	lcl	lhdi	lcapint
lbop	1.0000								
lhhc	-0.3470	1.0000							
lexp	-0.2658	0.9471	1.0000						
limp	-0.2569	0.9412	0.9805	1.0000					
lgovexp	-0.3786	0.9895	0.9216	0.9043	1.0000				
lprin	0.3258	-0.1867	-0.2030	-0.2358	-0.1748	1.0000			
lcl	-0.0431	0.1648	0.2924	0.3124	0.1101	-0.4708	1.0000		
lhdi	-0.2884	0.8871	0.8990	0.8935	0.8569	-0.2650	0.3801	1.0000	
lcapint	-0.3379	0.9661	0.9512	0.9755	0.9406	-0.2482	0.2748	0.9058	1.0000

Source: Computed by the author (2022) using stata. 14

Table 1 shows the estimates obtained from the pairwise correlation results for impact of economic development (HDI) on transfer of technology in Cameroon. It shows the relationship that exists between the variables. The signs for the variables; lhhc (Household consumption) ,lexp (Exports of goods and services) , limp (Imports of goods and services) , Lgovex (Government spending), lcl (Civil liberties index), Lcapint (Capital investment), and Lhdi (Human Development) is negative with the values -0.3470, -0.2658, -0.2569 , -0.3786, -0.0431, -0.2884 and -0.3379, respectively. This implies these variables have a negative relationship with economic development in Cameroon. Meanwhile Lprin (Political rights index) has a direct relationship with lbo (Technology transfer) with a coefficient which is positive with value of 0.3258.

Household consumption (lhhc) exhibits a direct relationship with the following variables because coefficients of the variables have positive values. That is lexp (Exports of goods and services (0.9471)), limp (Imports of goods and services (0.9412)), Lgovex (Government spending (0.9895)), Lcapint (Capital investment (0.1648)), Lhdi (Human Development (0.8871)). The variables Exports of goods and services, Imports of goods and services, Government spending, Human Development has a strong positive association with household consumption. Similarly, Exports of goods and services has an indirect relationship with Political rights with value of -0.2030. Meanwhile Exports of goods and services has a direct strong relationship with Imports of goods and services (0.9805), Government spending (0.9216), human development index (0.8990), Capital investment (0.9512) and a weak positive relationship with Civil liberties (0.2924). likewise imports of goods and services has a strong positive liaison with government expenditure with value 0.9043, economic development (HDI) with value 0.8935 and capital investments with value 0.9755 and it has a weak direct relationship with civil rights with value 0.3124. Meanwhile it has a weak indirect relationship with political rights (-0.2358). Also, government expenditure has a positive relationship with Civil liberties index, Capital investment and Human Development with coefficients 0.1101, 0.9406 and 0.8569 respectively. However imports of goods and services have a negative relationship with political rights with value -0.1748.

Political rights has a weak indirect liason with Civil liberties index (-0.4708), Capital investment (-0.2482) and Human Development (-0.2650). On the contrary Civil liberties index has a weak positive direct correlation with economic development (HDI) 0.3801 and Capital investment (0.2748) and lastly, economic development (HDI) has a strong positive relationship with capital investment (0.9058).

Regression results for the estimation of the impact of economic development on technology transfer

Table 4 presents the results of the impact of economic development (HDI) on the transfer of technology in Cameroon.

Source	SS	df	MS	Number of obs	=	43
Model	.419819383	8	.052477423	F(8, 34)	=	28.06
Residual	.063590518	34	.001870309	Prob > F	=	0.0000
				R-squared	=	0.8685
				Adj R-squared	=	0.8375
Total	.483409901	42	.01150976	Root MSE	=	.04325

lhdi	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
lbop	.0091166	.0293845	0.31	0.758	-.0505999 .0688833
lhhc	.1381751	.1132422	1.22	0.231	-.0919607 .368311
lexp	.1535474	.0766687	2.00	0.053	-.002262 .3093569
limp	-.169038	.0963362	-1.75	0.088	-.3648166 .0267407
lgovexp	-.1040179	.0892215	-1.17	0.252	-.2853379 .077302
lprin	-.0367515	.1522561	-0.24	0.811	-.3461732 .2726701
lcl	.1807873	.1108923	1.63	0.112	-.0445729 .4061476
lcapint	.1591891	.0824138	1.93	0.062	-.0082959 .3266741
_cons	-1.474049	.4047517	-3.64	0.001	-2.296604 -.651495

Source: Computed by the author (2022) using Stata 14

Source: Computed by the author (2022) using Stata 14

Table 4 above shows the regression result of impact of technology transfer on the economic development (HDI) in Cameroon. The variables lbop (Technology Transfer), lhhc (Household consumption), lexp (Exports of goods and services) have a positive sign. This can be explained as a 1% increase in technology transfer, Household consumption and exports of goods and services will lead to an increase in economic development by 0.009%, 0.138%, and 0.153% respectively. The results show a direct impact of technological transfers on economic development. This result is in line with the works of Przemyslaw et al (2017), Omer et al. (2012), Kingsly (2016) who in their findings showed that technology transfer has a great effect on productivity, wealth, health and life style of their respective countries.

On the other hand, the variables; limp (Imports of goods and services), Lgovex (Government spending) and Lprin (Political rights index) exhibits a negative sign. This indicates that; a percentage increase in imports of goods and services will lead to a decrease in economic development by -0.169% and it is statistically significant at 10% level. Similarly a percentage increase in Government spending will lead to a decrease in the economic development by -0.104%. The variable political rights show that an increase in political rights will lead to a drop of economic development by -0.0367%. Additionally the variables lcl (Civil liberties index) and Lcapint (Capital investment) have a positive sign. This denotes that an increase in Civil liberties and Capital investment will lead to an upswing in economic development by 0.181% and 0.159% correspondingly. The variable capital investment is equally statistically significant at 10% level.

V. CONCLUSION

This work set out to investigate the effect of the transfer of technology by MNC on the economic development of Cameroon. Results show that an increase in Technology Transfer, Household consumption, Exports of goods and services, Civil liberties index, and Capital investment will lead to an increase in the economic development of Cameroon. However, the increase in the Imports of goods and services, Government spending and Political rights index will cause the decrease in economic development of the country. It is very obvious that a country with political instability will discourage economic development. From this finding, we recommend the sustainable transfer of technology to Cameroon which comprises of the transfer of the know-how to enable Cameroon produce its own products than the transfer of the finished product as has been done over the years in Cameroon.

REFERENCES

- [1]. California Association for Local Economic Development (2020). Definition of Economic Development. Western City magazine, the monthly publication of the League of California Cities. www.westerncity.com.
- [2]. Djankov, S.; Hoekman, B., (1998). "Avenues of Technology Transfer: Foreign Investment and Productivity Change in the Czech Republic", Social Science Electronic Publishing Paper, 222, World Bank.
- [3]. Eric, Rugraffand Michael, W. Hansen (2011).Multinational Corporations and Local Firms in Emerging Economies. A m s t e r d a m U n i v e r s i t y P r e s s.

- [4]. Forgha, Njimanted Godfrey, Joseph, Tosam Ngong and Nembo, Kedju Lionel (2016) Multinational activities and economic growth in Cameroon. *Journal of Economics and International Business Management* Vol. 4(2), pp. 49-57, ISSN: 2384-7328
- [5]. Granta, Park, and Great, Abington (2021). *What is Technology Transfer? (Definition and Examples)*. Cambridge, CB21 6AL, UK . TWI PUBLISHER Copyright © 2021 All rights reserved.
- [6]. Hamid, Jafarih (2001). *Technology transfer to developing countries: aquantitative approach*. A Thesis submitted to the University of Salford in fulfilment of the requirement for the degree of doctor of philosophy. Technology, Information, Management and Economics (T. I. M. E.) Research institute.
- [7]. Hoffmann, Lutz (1985). *The transfer of technology to developing countries: Analytical concepts and economic policy aspects*, *Intereconomics*, ISSN 0020-5346, Verlag Weltarchiv, Hamburg, Vol. 20, Iss. 2, pp. 73-81. <http://dx.doi.org/10.1007/BF02928457>. <http://hdl.handle.net/10419/13996>. www.econstor.eu
- [8]. Mariacristina Piva (2003), *the impact of technology transfer on employment and income distribution in developing countries: A survey of theoretical models and empirical studies*, ILO Working Paper No. 15WP/015[ILO_REF]
- [9]. Kingslyawangollong (2016) *The Implication of Multinational Corporations in Poverty Eradication in Cameroon*. IGI Global. DOI: 10.4018/978-1-4666-9814-7.ch069 <https://www.researchgate.net/publication/318419760>
- [10]. Maha, Mohamed Asebai Mohamed, PingfengLiu andGuihuaNie (2021). *Are Technological Innovation and Foreign Direct Investment aWay to Boost Economic Growth? An Egyptian Case Study Using the Autoregressive Distributed Lag (ARDL) Model*. *Sustainability*. 13, 3265. <https://doi.org/10.3390/su13063265>
- [11]. *Market Business News* (2021). Omer Mahmoud, Othman khalifa, Aisha-Hassan A. Hashim, Rashid S.A and Shihab Ahmed (2012) *Technology Transfer in Developing Countries. Advances in Natural and Applied Sciences*, 6(5): 620-624. ISSN 1995-0772
- [12]. Przemyslaw, Kowalskii, Daniel Rabaiolli and Sebastian, Vallejoi (2017) *International Technology Transfer measures in an interconnected world*. *OECD Trade Policy Papers*. No. 206 .85 pages
- [13]. United Nations (2004) *Facilitating Transfer of Technology to Developing Countries: A Survey of Home-Country Measures*. UNCTAD Series on Technology Transfer and Development. New York and Geneva.

Appendices

year	Communications, computer, etc. (% of service imports, BoP)	Household consumption, billion USD	Exports of goods and services, billion USD	Imports of goods and services, billion USD	Government spending, billion USD	Political rights index, 7 (weak) - 1 (strong)	Civil liberties index, 7 (weak) - 1 (strong)	Human Development Index (0 - 1)	Capital investment, billion USD
yr	BOP	HHC	EXP	IMP	GOVEXP	PRIN	CL	HDI	CAPINT
1977	31.07008	2.17	0.84	0.94	0.33	6	5	0.350114	0.96
1978	33.79488	2.8	1.04	1.24	0.43	6	6	0.372075	1.38
1979	34.38195	4.03	1.22	1.64	0.54	6	6	0.394036	1.66
1980	44.07395	4.62	1.88	1.83	0.65	6	6	0.391	1.41
1981	46.54014	5.46	1.67	2.17	0.68	6	6	0.471286	2.08
1982	49.63784	4.51	2.43	2.12	0.65	6	6	0.46825	1.82
1983	50.18294	4.68	2.24	2.16	0.7	6	6	0.465214	1.92
1984	50.55714	4.82	2.61	2.42	0.75	6	7	0.462179	2.02
1985	48.60669	5.24	2.73	2.57	0.73	6	7	0.459143	2.03
1986	25.66299	6.65	2.47	2.41	1.2	6	6	0.456107	2.71
1987	40.97376	8.22	2.05	2.54	1.5	6	6	0.453071	3.04
1988	33.07632	8.53	2	1.99	1.34	6	6	0.450036	2.61
1989	34.9203	7.7	2.31	1.98	1.2	6	6	0.447	1.9
1990	22.14725	7.42	2.25	1.93	1.42	6	6	0.445	1.99
1991	27.55756	8.04	2.49	1.82	1.65	6	6	0.442	2.07
1992	35.71369	8.05	2.34	2.09	1.46	6	5	0.438	1.63
1993	38.82297	10.46	2.16	1.94	2.23	6	5	0.432	2.59
1994	37.86706	7.05	2.24	2.01	1.23	6	5	0.43	2.09
1995	37.45279	6.35	1.99	1.7	1.07	7	5	0.429	1.93
1996	61.8532	7.1	2.45	2.44	1.23	7	5	0.428	2.17
1997	56.64726	7.33	2.7	2.7	1.2	7	5	0.429	2.31
1998	39.92247	7.25	2.39	2.38	1.11	7	5	0.434	2.25
1999	39.69506	7.68	2.25	2.28	1.27	7	6	0.434	2.28
2000	54.5433	6.89	2.61	2.52	1.08	7	6	0.439	2.02

2001	57.72024	7.05	2.68	2.93	1.21	6	6	0.455	2.36
2002	63.61699	8.01	2.81	3.19	1.31	6	6	0.457	2.64
2003	49.51224	10.27	3.04	3.74	1.68	6	6	0.463	3.3
2004	45.57983	11.84	3.96	4.22	1.95	6	6	0.468	3.9
2005	35.9587	12.36	4.41	4.73	1.97	6	6	0.469	3.94
2006	35.84347	13.44	4.96	5.09	1.99	6	6	0.47	4.05
2007	35.93067	15.55	6.46	6.62	2.31	6	6	0.481	4.66
2008	48.55947	18.13	7.67	8.69	2.93	6	6	0.489	6.37
2009	44.25533	18.13	5.57	6.86	3.02	6	6	0.497	6.16
2010	47.03163	18.37	5.8	7.05	2.98	6	6	0.471	6.07
2011	20.4102	20.22	7.62	9.11	3.56	6	6	0.513	7.09
2012	25.80634	20.13	7.6	8.81	3.56	6	6	0.524	6.63
2013	30.91757	22.36	8.27	9.72	3.99	6	6	0.531	7.46
2014	30.44746	24.14	8.73	10.54	4.25	6	6	0.54	8.42
2015	25.68175	21.86	6.88	8.54	3.8	6	6	0.548	6.93
2016	27.56859	22.85	6.28	7.82	3.96	6	6	0.556	7.38
2017	32.30932	24.49	6.51	7.91	3.9	6	6	0.56	8.03
2018	30.86988	27.27	7.47	9.17	4.3	6	6	0.563	8.82
2019	31.61712	27.69	7.89	9.62	4.24	6	6	0.563	8.81

Susannash Limunga Esowe. "An Empirical Investigation of the Effect of Technology Transfer by MNC on the Economic Development of Cameroon." *International Journal of Business and Management Invention (IJBMI)*, vol. 11(08), 2022, pp. 01-08. Journal DOI- 10.35629/8028