Foreign Direct Investment and the Natural Resource Curse; what is the relationship to Economic Development, Income Inequality and Poverty? Do Institutions and Good Governance Matter?

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Abstract: The aim of this study is to econometrically investigate whether the Dutch Disease and Rent Seeking effects related to the Natural Resource Curse, undermine Foreign Direct Investment's effect on Economic Development, Income Inequality and Poverty. This involves a cross-country analysis of 69 developing countries over two decades, 1970-1990.

1. INTRODUCTION

Foreign Direct Investment (hereon referred as FDI) is highly accredited for inducing growth and has become synonymous with the term "spillover". However these spillovers can either be positive (Litchtenberg & Potterie 1998, Brown et. al 2002) or negative (Blomstrom 1989, Aitken & Harrison 1999). Despite such contradictions, academicians and policy makers alike are banking on it to boost growth and reduce poverty. According to Asiedu (2005), the New Partnership for Africa's Development (NEPAD) proposes that Africa should resort to FDI to bridge the annual resource gap of $64 billion that is needed for poverty alleviation. Perhaps the most ambitious expectation yet, as she points out, is the United Nations expectation that FDI will halve extreme poverty by 2015 as declared in their Millennium Development Goals. These great expectations appear to be reflected in the current global demand and dramatic surge in FDI. According to UNCTAD[1] (2005), worldwide FDI was $896.7 billion, up by 29% from the previous year with increases to developing countries of $273.5 billion and developed countries of about $537.2 billion (see Appendix 3).

The increase in the worldwide volume is equally marked by a tight race that has generated an uneven distribution, with many countries being marginalized. According to the World Bank (2004), *" flows of foreign direct investment (FDI) to developing countries have declined by 26 percent since 1999, while China's share has increased from 21 percent to 39 percent. FDI levels in Africa, the Middle East, and South Asia have remained low"*. This demonstrates a clear uphill battle for many developing countries; while some claim success, many others find this quest evasive. Coupled with this trend is

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[1] United Nations Conference on Trade and Development

the heightened concern that FDI to some developing countries may be motivated by a scramble for natural resources[2]. The World Bank (2005) also indicates that,*"FDI to the African nations has increased in all the major oil producing countries (including Sudan) as well as in Egypt and South Africa. Over all FDI to the region reached an estimated new record of $ 29 billion"*. Despite a growing concern, research is lacking on FDIs association with natural resource intensity. Unfortunately, previous studies have only focused on spillover effects in the manufacturing sectors (Brown et al 2002, Blomstrom & Wolf 1994, Aitken & Harrison 1999). Some authors like Asiedu (2005) have however commented on FDIs relation to the natural resource sector. She remarks, *"FDI does not have the positive spillovers of job creation and technology transfers because countries that are rich in resources generally channel FDI to the natural resource industries"*. The implication is that the non-resource sectors (including the manufacturing sector) will not gain any positive externalities.

However this fact remains unsubstantiated. Consequently, an investigation into this matter is direly needed in the literature. The role of the natural resource sector has equally been called into question by Sachs & Warner (1997) (hereafter SW (1997)). They attribute the depressed growth behavior of resource-endowed countries to the Dutch disease and Rent-seeking activities associated with the "Natural Resource Curse". Their research concludes that,*" resource-abundant countries tended to be high-price economies and that, partly as a consequence, these countries tended to miss-out on export-led growth"* (SW 1997). Both notions evoke a critical question of how FDI will perform in the context of natural resource abundance? Will the Natural Resource Curse prevail or

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[2] See Asiedu 2005 for further discussions

can FDI dominate and consequently stimulate growth, reduce poverty and income inequality? What can policy makers do to ensure a desirable impact?

In lieu of this fact, we specifically seek to investigate FDIs effect on economic development, income inequality and poverty given the role of the Dutch disease and Rent- seeking behavior in resource abundant countries. This study will effectively broaden our understanding of the key forces that drive this relationship and will concurrently guide us with appropriate policies accordingly. The paper will be divided as follows: Section 2 covers the background of FDI, the Natural Resource Curse, the Dutch disease and rent- seeking effects; Section 3 illustrates the functioning of FDI in a theoretical framework; Section 4 summarizes literature on FDI and growth, income inequality and poverty; Section 5 presents the hypotheses, models and data used in the empirical analysis; Section 6 presents the results of our empirical investigation. Section 7 draws the conclusion and proposes policies and future research.

2. Background

2.1 Foreign Direct Investment (FDI)

As supposed to other capital flows, FDI is an "*investment involving a long-term relationship and reflecting a lasting interest of a resident entity in one economy (direct investor) in an entity in an economy other than that of the investor*" (UNCTAD 2004). The IMF also defines it as a "*category of international investment that reflects the objective of a resident in one economy (the direct investor) obtaining a lasting interest in an enterprise resident in another economy*" (IMF 2005). Hood & Young (1979) explain that prior to 1914 portfolio investment was the predominant mode of capital; the UK emerged as the key creditor nation investing 60% in the US and Australia, particularly in

government securities and the railway sector. FDI then gained momentum after World War II during when it was pursued as a means to induce growth. Both the invention of the aircraft and the computer supposedly enhanced the spread of capital by facilitating transnational production. FDI progressively became significant in jumpstarting development in many countries. In the 1950's, it was advocated under the guise of "industrialization by invitation". This concept involved the formation of a backward-linking operation between a Multinational Corporations (MNCs) and a corresponding host country. The arrangement of a supplier of capital and infrastructure in exchange for final goods often resulted in a domino effect that ultimately led to growth in the host country. Nobel laureate Sir Arthur Lewis was often accredited with this phenomenon, particularly because he proposed policies that convinced foreign companies to establish industries in the small countries in the Caribbean to help them overcome trade limitations. The package often included tax holidays, tariff exemptions, export allowance, dividend payments and depreciation.

Surprisingly, such incentives continue to be actively adopted by current governments to lure foreign companies. The logic for resorting to FDI is rooted in two main theoretical perspectives: Industrial organization and Trade Theory. Hymer (1960) and Macdougall (1960) respectively champion these theories. While Macdougall (1960) acknowledges MNCs contribution of intangible productive assets, Hymer (1960) criticizes their motives. Hymer (1960) argues that MNCs are motivated by three things: (1) Profit Exploitation 2) Elimination of Competition 3) Diversification and Risk Spreading. The author stipulates that MNCs have a size that unfairly accords them a competitive advantage to exploit opportunities abroad. He argues that they strategize to

displace local firms so as to maintain their dominance in the market while concurrently minimizing their overall risk. Hymer (1972) further argues that MNCs generally maintain high skilled positions in their home countries while creating only low skilled positions in the host country thereby dismissing the locals' education and skills. According to Mallampally & Sauvant (1999), UNCTAD identifies market seeking, resource/assets seeking and efficiency seeking as the main economic determinants of FDI and in that sense, parallels Hymer (1972)'s argument. The authors describe market seeking as involving strategic positioning of facilities to gain access to large markets while resource seeking involves the pursuit of natural resources or human capital that promise complementary benefits. Efficiency seekers on the other hand are more driven by a desire for locations with low production costs.

In contrast to Hymer (1960), Macdougall (1960) proposes that host countries gain tremendously when they embrace FDI. These gains are realized particularly in employment, technology and capital flows. Appleyard & Field (2001) discuss additional gains like increases in output, wages, exports, tax revenues, realization of economies of scale and weakening domestic monopoly. The authors equally identify possible adverse effects on commodity terms of trade, decreases in domestic saving and investment, instability in the balance of payments and the exchange rate and increase in unemployment. The question for us is how these factors play out in resource-abundant economies particularly its relation to the Dutch disease and Rent-seeking activities.

2.2 Natural Resource Curse, Dutch Disease & Rent Seeking

The Natural Resource Curse remains as one of the most perplexing economic paradoxes ever studied. As explained by SW (1997), countries that are richly endowed with natural resources experience slower long-term growth than their less-endowed counterparts. They illustrate this graphically in figure 1 (see SW (1997) appendix) where the high ratio of natural resource exports to GDP in the base year 1970 is followed by slow growth from 1970-1990. They identify the Dutch disease and Rent-seeking activities as culprits in this process. The Dutch disease manifests itself as "de-industrialization" where the manufacturing and non-resource sectors collapse as a result of resources being diverted into natural resource production. By diverting resources like domestic investment, the natural resource sector has been described as "crowding out" the other sectors. For instance, Tietenburg (2006) comments that: *"large rents in natural resource sector, "crowds out" most resources, including investment, thereby leading to underdevelopment"*. Both authors drive home the point that ultimately, economy-wide employment and long-term growth suffer and are negatively impacted.

Another element of the Resource Curse is Rent-seeking activities. SW (1997) discusses earlier arguments that propose that resource-endowed countries have poor institutions because of high economic rents. They argue that rents from the thriving resource sector generate high corruption, inadequate red tapes as well as poor government efficiency. They depict an image of a "feeding frenzy" where government officials scramble to have a piece of the national cake. They argue that such inefficiencies depress investment demand and innovation because of special-interests groups and ultimately lead to a negative impact on growth. In effect the resource sector becomes the

center of attention of the whole economy thereby leaving no incentive to diversify other sectors. The end result is a downward spiral leading to economic slow down. SW (1997) comment that because rent seeking is a 'dead weight loss", activities that promote rent-seeking activities are detrimental to overall growth. The authors find a positive correlation between growth and good governance as well as with legal institutions. The implication is that these factors are pivotal for growth.

3. THEORETICAL FRAMEWORK

We capture FDIs role in an economy with a typical aggregate production function that relates national output to the economy's factors of production. Our model parallels Borensztein, De Gregorio & Lee (1998)(hereafter BDL (1998)). It reflects an economy where savings (investment), is the initial driving force of increases in the level of output.

$$Y_t = Ae^{rt} K_t^{\alpha} L_t^{\beta} \tag{1}$$

Where Y_t is gross domestic product in time period t, r is the rate of technical progress, K_t is Capital Services in period t, L_t is Labor Services in period t and A represents a constant.

Total investment in period t (I_t) is given by:

$$I_t = S_t = DI_t \qquad\qquad S_t = \theta Y_t \tag{2}$$

Where S_t is domestic savings in period t, DI_t is domestic investment in period t and θ is the propensity to save. In effect, the domestic investment(I_t) which provides the stock of domestic capital is given by domestic savings(S_t). In autarky, the local owners of capital who tend to have a high marginal propensity to save, provide the investment. In effect total investment (I_t) is implicitly equivalent to domestic savings (S_t).

The capital stock in period t (KS_t) is given by:

$$KS_t = KS_{t-1} + I_t - \delta KS_{t-1} \qquad\qquad (3)$$

Where KS_{t-1} is the capital stock at the end of the previous time period t-1 and δ is the rate of depreciation. Typically, total current capital is derived from the accumulation of capital stock from the previous time period. When investment increases, it causes a chain reaction. First, it generates an increase in capital stock and that in turn increases capital per worker. Ultimately, this raises the level of output per person. As the cycle continues, there is an additional boost to savings and investment. Reinvestment of the savings and investment in the economy causes both K_t and Y_t to expand further.

However as demonstrated by the Solow growth model, the amount of depreciation ultimately catches up with the amount of new investment and the economy then reaches a steady state. This implies that the effect of an increase in investment on the rate of growth of Y is limited to the short-term and not sustainable in the long-run. With the introduction of foreign investment, the total investment will be given by:

$$I_t = DI_t + FI_t \text{ where } FI_t \text{ is the foreign investment} \qquad\qquad (4)$$

Foreign investment essentially supplements domestic investment and enhances overall investment I_t and ultimately capital stock K_t. This is especially desirable if DI_t in the host country is low. As with the domestic investment, the initial impact on the economy is negligible but the compounding effect has greater significance. The foreign company contributes positively by providing the technology needed for long-term growth. This means that the rate of technical progress r may increase as a result of foreign investment. Contrary to a closed economy which is constrained by diminishing returns, foreign investment in an open economy serves as a catalyst for technological progress. It enables the country to use its capital and labor more efficiently to expand its

production. However, this effect may not be realized if the foreign company remits its profit back to the home country; basically the situation reverts back to autarky. Foreign investment in resource-endowed countries enables the host country to exploit its resources, which it otherwise cannot afford to undertake due to high research and extraction cost. In effect, foreign firms bear the high costs thereby sparing local firms of such a burden. The new opportunity also translates into higher overall output and government revenues.

This process mirrors the staple model of economic growth aspect of the "vent for surplus" theory proposed by Richard Caves (1965) in that "resource-endowed" countries with "surplus" natural resource attract capital and labor from "less endowed" regions. The migration to such economies is driven by the demand for "intermediate goods" produced in the "less-endowed" countries. The end result is successive increases of total income and income per capita in both regions. While the model has been linked to development in some economies like Canada, some argue that the technological spillover effect which is reflected in an increase in r, may be minimal particularly because these sectors are more capital intensive than labor intensive.

4. LITERATURE REVIEW

4.1 Economic Growth

FDI-led growth has emerged as one of the most predominant subjects in the growth literature. While the verdict remains mixed, a common theme that runs through the literature is the need for an environment that is conducive for growth. Barro (2001) lists variables like high levels of schooling, good health, low fertility, low government welfare

expenditures, rule of law and favorable terms of trade as being pivotal for growth. In his research he establishes a positive relationship between the growth rate of real per capita GDP and initial human capital for 98 countries from 1960-1985. In the aftermath, many studies have followed his lead in investigating these prime variables as the channels through which FDI impacts growth.

For instance, BDL (1998) investigates the role of human capital and concludes that FDI contributes to economic growth only when the host country has adequate human capacity to maximize the technology being injected. In essence, high levels of human capital lead to high effect of FDI on economic growth. The authors also explore the possibility that FDI may "crowd out" domestic investment. They describe the "crowding out" effect of domestic investment as the repression of domestic investment due to FDI absorbing credit in the product and financial markets. The logic is that FDI can adversely impact capital accumulation and ultimately economic growth. They uncover that FDI does not "crowd out" but rather "crowds in" or induces investment.

Blonigen and Wang (2004) attribute the positive correlation results in most studies to the erroneous sampling of data. They argue that contrary to their approach, most studies lump the two distinctive samples together and often draw conclusions that a positive correlation exists. They also find that FDI has a higher probability of "crowding in" investment in LDCs than DCs. Early literature by Bornschier, Chase-Dunn & Rubinson (1978) demonstrate that, FDI has different implications when different measurements are used. Upon separating FDI into "stocks[3]" and "flow[4]", they find that current investment "flows" increases the rate of economic growth while "stocks" have a

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[3] Bornschier et. al (1978) define FDI "stocks" as total cumulative value of foreign owned capital in a country
[4] They define "flows" as current account inflows of foreign capital for some time period

long-run negative effect. They attribute this fact to the slow down of inward foreign investment, which they stipulate translates into less physical capital and job formations.

Kentor (1998) also finds similar results when he uses data from 1940-1990 to investigate the long-run effect of dependence on foreign investment. He concludes that countries that depend heavily on foreign capital have a slower rate of economic growth than the less dependent countries. Both authors' argue in favor of the dependency theory[5]. Rothgeb (1984) shows that FDI has different effects for different third world countries. He finds that in third world countries, flows have a positive short-run effect on overall growth but stocks have a long-run negative effect. He equally finds that FDI correlates positively with growth in all sectors.

4.2. Income Inequality

In recent years, FDIs relation to Income Inequality has been associated with the global trend. Goldberg & Pavcnik (2007) remark that: "*...all existing measures for inequality in developing countries seem to point to an increase in inequality which in some cases is severe".* Per the authors, globalization affects labor income, relative prices (consumption) and household production decisions. However, the country attributes, time and case equally play a significant role. The authors argue that contrary to economic theories, globalization has not benefited the less-skilled in developing countries. In earlier literature, Bornshier & Balmer Cao (1979) find that FDI has a long-term effect of increasing income inequality[6]. They argue that FDI dependence affects class structure in the country and that in turn converts to political power and eventually increases income

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[5] Kentor (1998) explain the "dependency theory" as implying that ownership of capital determines its effect on the underdeveloped economy
[6] Bornshier & Ballmer Cao (1979) define income inequality as "distribution of money income across households or individuals of a country

inequality. In effect personal income inequality is a function of the distribution of power. They also notice that countries with greater unequal income distributions attract more foreign investment meaning that both inequality and dependency go hand in hand.

Alderson & Nielson's (1999) study shows that FDI "stock" significantly increases income inequality. They argue that the shift of labor from the agriculture to the manufacturing sector is what causes this inequality. Their model encapsulates the Kuznets inverted "U" shape relationship between development and inequality. They stipulate that a rapid population growth increases income inequality by producing a large number of young people who earn low income and as a result inflate the bottom of the income distribution. This notion of labor shift in sectors equally applies to resource-abundant economies. For instance, Gleason (2000) remarks that high wages in the resource sector can lure innovators and entrepreneurs away from other sectors. This implies that labor will shift to the resource sector similarly to the development process.

4.3 Poverty

FDIs effect on poverty has equally been debated extensively. In the public domain, the subject of welfare gains for the poor in the global economy has been plagued with much skepticism. Aisbert (2005) discusses at length the many concerns. She attributes the confusion to misinterpretation of the evidence by extremists who are often driven by their own values and beliefs. In her assessment, vulnerability to external shocks is the biggest concern for the poor. Meaning that FDI and trade liberalization could increase risks in poor households. She further argues that: *" the linkages between globalization policies and poverty outcomes are theoretically unclear and empirically hard to test"*. While Fischer (2003) agrees about the challenges of globalization he concludes that: *"...the*

surest way to sustained poverty reduction is economic growth". Given the correlation
between FDI and economic growth it follows that FDI be used as the vehicle for poverty
reduction. In a World Bank sponsored project, Klein, Aaron & Hadjimichael (2001)
conclude that FDI is pivotal for poverty reduction. In their words, *"Foreign direct
investment remains one of the most effective tools in the fight against poverty"*. They
argue that FDI fosters a "rapid and efficient transfer and adoption of best practice"
thereby leading to an "improvement in human capital" and ultimately "broad-based"
growth. The growth in turn becomes the main mode of poverty reduction.

Contrary to Aisbert (2005), they argue that FDI can minimize negative shocks for
the poor who are subjected to financial instability. In their investigation on liberalization
and its perceived adverse effect on poverty, Winters, McCulloch & McKay (2004) did
not find evidence of a negative effect on poverty. Their study was based on four settings:
macro-economic aspects (growth and fluctuations), households and markets, wages and
employment, and government revenue and spending. In response to criticisms about
conventional measures of poverty, Firebaugh and Beck (1994) use Human Development
Indexes (HDIs) as alternative measures of poverty. They use food consumption, infant
survival, and life expectancy to study the effect of investment and trade dependence on
the poor in 62 developing countries over a 20-year period. They find a large and robust
effect of FDI on overall national welfare. Some other studies propose that poverty is
exacerbated in a global environment as a result of its relation to income inequality. For
example, Goldberg & Pavcnik (2007) explain that the wage gap between the skilled and
unskilled in a global setting widens thereby leading to poverty. They argue that in such an
environment there is "less secure employment and more volatile income".

5. DATA & MODEL

In our study, we perform a cross-country analysis of 69 developing countries over two decades, 1970-79 and 1980-89. We use the Seemingly Unrelated Regressions (SUR) technique similar to BDL (1998). Our FDI data is gross foreign direct inflows from the *2001 World Bank Development Indicators CD* while our Gini Index (measure of income inequality) and headcount index (measure of poverty) are from the *World Bank PovcalNet.* We use control variables from both BDL (1998) and SW (1997) to allow comparisons to those studies.

Included in this list of variables are initial GDP, human capital accumulation rates, government expenditure ratios, openness policy, changes in the external terms of trade, black market premium, terms of trade volatility, regional effects and efficiency of government institutions. The analysis will be two fold; in the first phase we have two models that examine the correlation between FDI and the Dutch Disease as well as FDI and Rent-Seeking in resource-endowed countries. In the second phase we estimate FDIs impact on our main dependent variables: growth, income inequality and poverty in resource-endowed countries. We modify the Dutch disease model used by SW (1997) to reflect FDI and our key variable, FDI x SXP. Our model is in effect given by:

$$DD_{it} = b_{0,t} + b_1(SXP)_{it} + b_2(FDI)_{it} + b_3(FDI \times SXP)_{it} + b_jX + \varepsilon_{it}$$

where DD_{it} is the Dutch Disease for country i in period t and SXP_{it} is the share of exports of primary products (natural resources) in GDP in 1970 for country i. SXP_{it} comprises of both "non-fuel primary products" and "fuel" exports. FDI_{it} is inward foreign direct investment for country i in time period t and it is measured as the ratio of gross FDI inflows to GDP. FDI x SXP is the product between FDI and the primary export share

(SXP). It is our key variable that captures the interaction effect of the two variables. X

represents other control variables used. Our dependent variables (increases in export

share of manufactures (DMX), growth of services and manufactures output (GNR) and

the output of the service sector relative to the manufacturing (SERVS)) correspond to the

three sectors (tradeable natural resource sector, tradeable (non-resource) manufacturing

sector and a non-traded sector) discussed by SW (1997).

   We share the authors' premise that resource abundance causes more demand for

non-traded goods thereby leading to the decline in the other sectors. The authors allude to

early literature (Hirschman 1958, Seers 1964) arguments that the root of the negative

impact lies with the absence of "backward and forward linkages" in the resource sector as

supposed to the manufacturing sector. SW (1997) emphasize that the resource sectors

technically miss out on positive externalities (learning-by-doing e.t.c) as well as

increasing returns to education. The expected signs for the respective dependent variables

(DMX, GNR, SERVS) in the Dutch Disease model are as follows: primary export share

$(-, -, +)$, foreign direct investment $(+, +, -)$, product of foreign direct investment and

primary export share $(?,?,?)$.

Our Rent Seeking Model is similarly given by:

$$RSK_{it} = b_{0,t} + b_1(SXP)_{it} + b_2(FDI)_{it} + b_3(FDI \times SXP)_{it} + b_I X + \varepsilon_{it}$$

where RSK_{it} denotes rent-seeking activities and the explanatory variables remain as

previously explained in the Dutch Disease model. RSK_{it} is proxied by several variables:

government repudiation of contracts index (GRC), risk of expropriation index (RE),

corruption in government index (CORR), rule of law index (RL) and bureaucratic quality

(BQ) index. These measures range from low to high with respective corresponding

scales of (0-10), (0-10), (0-6), (0-6), (0-6). Earlier literature, (SW (1997)), suggests that SXP_{it} will have a negative coefficient; they argue that countries with abundant resources are typically characterized by poor institutions and governance. The signs for both FDI and the interaction term FDI x SXP could be either positive or negative. The next stage of our study involves the main dependent variables and estimates FDIs effect on growth in resource abundant countries. The model has the same explanatory variables as the previous models and is given as:

$$GR_{it} = b_{0,t} + b_1(SXP)_{it} + b_2(FDI)_{it} + b_3(FDI \times SXP)_{it} + b_IX + \varepsilon_{it}$$

GR denotes per capita growth and is calculated as the average annual rate of per capita real GDP over each decade, 1970-79 and 1980-89.

The main hypothesis is summed up as follows:

H_0 : $b_3 \leq 0$ (FDI decreases growth in resource-endowed countries)

H_A : $b_3 > 0$ (FDI increases growth in resource-endowed countries)

In the model, a positive coefficient on the interaction term FDI x SXP indicates that FDI is compelling enough to overcome the Dutch disease and induce overall growth. It also implies that resource abundance is not an impediment to FDI-led growth. The income inequality effect, is similarly estimated by the model:

$$GINI_{it} = b_{0,t} + b_1(SXP)_{it} + b_2(FDI)_{it} + b_3(FDI \times SXP)_{it} + b_IX + \varepsilon_{it}$$

where GINI denotes the gini index and measures the inequality of the income or wealth distribution in the country population. In this scenario, we are testing the hypothesis:

H_0 : = $b_3 \leq 0$ (FDI decreases income inequality in resource-endowed countries)

H_A = $b_3 > 0$ (FDI increases income inequality in resource-endowed countries)

Based on previous studies (SW 1997), we expect our interaction term FDI x SXP to have a positive sign. We argue that FDI increases income inequality in resource-endowed countries for two reasons: (1) divergence in wages due to the shift in labor from both the manufacturing and non-resource sector to the resource sector in the short-run (2) divergence in wages due to unemployment stemming from the collapse of both the manufacturing and non-resource sector in the long-run. This is in line with Gleason (2000)'s remark that high wages in the resource sector can lure innovators and entrepreneurs away from other sectors. In testing FDIs effect on poverty we use the following model:

$$\text{HEADCOUNT}_{it} = b_{0,t} + b_1(SXP)_{it} + b_2(FDI)_{it} + b_3(FDI \times SXP)_{it} + b_IX + \varepsilon_{it}$$

Where HEADCOUNT is the measure of poverty. It is represented by the share of a population living in households with income below the $1 poverty line. The hypothesis is essentially summed up as:

H_0 : $b_3 \geq 0$ FDI increases poverty in resource-endowed countries

H_A : $b_3 < 0$ FDI decreases poverty in resource-endowed countries

Previous literature (Klein, Aaron & Hadjimichael 2001) suggests that FDI will typically have a negative coefficient however with the presence of the resource-endowment variable in this study, the sign is uncertain.

6. EMPIRICAL RESULTS

6.1 Evidence of Dutch Disease?

6.11 Crowding-out of domestic investment?

Table 1 summarizes the "crowding out" effect of domestic investment. In regression 1.1, we find that primary export share (SXP) has a negative effect on domestic investment

although not significant. This sign is consistent with SW (1997)'s results where they conclude that SXP "crowds out" domestic investment. On the hand, the coefficient for FDI in regression 1.2 is positive and robust similar to BDL (1998). This reflects a "crowding-in" effect and implies that FDI compliments domestic investment. Our interaction term FDI x SXP has a positive sign in regressions 1.3 through 1.6. This sign is maintained when the regional dummies and the institutional quality variable are included. However the coefficient gains significance only with the addition of the institutional variable. We conclude that in resource-endowed countries, FDI "crowd outs" domestic investment.

6.12   Sector Changes

Table 2 presents the results of our Dutch disease model constructed in section 5. In regression 2.1 we find that FDI has a positive effect on the share of manufacturing exports (DMX) meaning that FDI enhances manufacturing export share. On the other hand, primary export share (SXP) maintains a negative sign consistent with SW (1997). The authors find that resource-endowed countries have a slower growth in their manufacturing export share. Interestingly, the coefficient for our interaction term FDI x SXP, turns up positive.

This result is interesting because it implies that FDI has the propensity of inducing growth in the manufacturing sector of resource-abundant countries thereby reversing the Dutch disease. Following SW (1997), we further examine growth in the non-resource economy. Our results in regression 2.2 shows that both FDI and our interaction term, FDI x SXP have negative associations with growth in the non-resource economy (GNR). Next, we examine the output of the non-traded sector relative to the manufacturing sector. In regression 2.3, SXP, FDI and our key term FDI x SXP all have

a positive sign. While our signs are not significant for SXP and our interaction term, FDI x SXP, it is significant for the stand-alone FDI.

6.2 Evidence of Rent-Seeking?

Our results in Table 3, supports SW (1997)'s findings that resource abundance is negatively correlated with all the indicators of good governance and quality institutions. FDI on the other hand is positively associated with these indicators. The positive coefficient we get for our interaction variable FDI x SXP, suggests that in resource-endowed countries, FDI is positively associated with government repudiation contracts (grc), rule of law (rl) and bureaucratic quality (bq). This implies that the presence of MNCs can to some extent be encouraging governments to strive for a better investment climate. Our assessment of the negative correlation with corruption (corr) and the risk of expropriation (re) is that inefficiencies associated with corruption and government interventions may be the biggest impediment to a promising private sector. These preliminary regressions provide an insight on how the Dutch disease and rent seeking activities may influence FDIs effect on our key dependent variables.

6.3 Economic Growth

Our first regression 4.1 presents an autarky scenario with only domestic investment and the control variables: initial income (GDP), male schooling (School), government expenditure (Govt Exp), black market premium (Blk Mrkt Premium) and primary export share (SXP). Similar to SW (1997), our domestic investment turns up with a positive and significant coefficient while our primary export share (SXP) is negative and significant. Next, we assess the significance of FDI by excluding domestic investment in regression 4.2 in contrast to the previous regression; FDI turns up positive and statistically

significant while SXP maintains the same negative sign. This result suggests that FDI

has a greater impact than domestic investment (coefficient of 0.28 in regression 4.1

versus 0.16 in 4.2). In regression 4.4 we replace FDI with FDI x SXP and test the effect

of our interaction term; we get a positive and significant coefficient. For a more complete

assessment of the variables' impact on growth both individually and interactively, we

include SXP, FDI and FDI x SXP in the next regression 4.5. The coefficient for our

interaction term turns up positive and significant. Just as we hypothesize, FDI has a

dominant effect and overshadows the adverse effect of the Dutch Disease and Rent-

seeking activities. This also brings to question the argument that FDI in resource sector

generally lacks positive "spillover" or externalities.

Based on the results from our Dutch disease model, we argue that natural resource

production does not necessarily promote de-industrialization as previous literature

suggests. Under certain circumstances such as where FDI is present, one may observe a

contradiction; the manufacturing sector could benefit. It really depends on how the

revenues from the resource sector are used. Our specification in regression 4.5 suggests

that the effect of FDI on growth can be calculated as $b_2(FDI)_{it} + b_3(FDI \times SXP)_{it}$. Given

that our coefficients for FDI and FDI x SXP are 0.045 and 1.637 respectively, the effect

of FDI on growth is: 0.045(FDI)+1.637 (FDI x SXP). Using a 1980 sample mean where

resource endowed countries have a mean ratio of 0.24 to GDP, we deduce that a unit

standard deviation (0.021) in the FDI to GDP increases growth by 0.08 percentage

points[7]. While this one-time gain may be considered negligible, the compound effect as

echoed by Van Den Berg (2003) is generally significant. This implies that resource-

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[7]Economic Growth=0.045(FDI)+1.637(FDI x SXP)*0.021(FDI Standard Deviation)

endowed countries could overcome the natural resource curse as they embrace FDI over time. We also observe that the coefficient for the individual variables FDI and SXP, are consistent with BDL (1998) and SW (1997); they are positive and negative respectively. Our interaction term, FDI x SXP continues to be robust in subsequent regressions that include additional variables. For our regional dummies of Africa and Latin America in regression 4.6, our coefficients turn up negative however the coefficient for Africa is not statistically significant. Our quality of institutional variable on the other hand turns out positive and significant in regression 4.7.

6.4 Income Inequality

In regression 5.1 we assess the effect of our stand-alone variables, FDI and SXP while controlling for variables employed in previous studies. FDI turns up with a positive coefficient. Our result is consistent with Alderson & Nielson (1998). We also get a positive and significant coefficient in regression 5.2 where we substitute the stand-alone FDI with the interaction term, FDI x SXP. In our main regression 5.3, we include the interaction term FDI x SXP along with the stand-alone variables FDI and SXP to better evaluate the joint effect. The coefficient for our interaction term turns up positive and significant just as we hypothesize.

This result suggests that FDIs positive association with income inequality as observed in previous studies equally applies to resource-endowed countries. We argue that the inequality is rooted in the wage gap between the resource sector and the other sectors caused by the demand for and shift in labor from the non-traded sector into the resource sector. The notion of sector transitions inducing inequality in the short-term parallels Kuznets hypothesis. He argues that inequality is a result of workers moving

form the agriculture sector to the industry sector or rural workers migrating to urban jobs. Consequently, this problem can be addressed with diversification (development of other sectors) along with policies that improve institutions and enhance trade. In regression 5.4 we find evidence that a country's level of openness decreases income inequality. Following Barro (2000)'s argument about the role of credit in an economy, we introduce the financial depth variable in regression 5.5. This variable reflects the financial development and relevance of credit in a country. We find a negative effect (a decrease) on income inequality though not significant.

6.5 Poverty

Our main result reveals that while FDI decreases poverty, elements of the natural resource curse which characterize resource-abundant countries, undermines and reverses this effect. Similarly to our preceding analysis, our regression 6.1 begins with an autarky scenario where only domestic investment prevails. Regression 6.2 then follows with an addition of the FDI variable. In the respective regressions, both stand-alone variables, SXP and FDI have a negative effect on poverty. Interestingly, in our subsequent regressions 6.3 through 6.6, our interaction term, FDI x SXP has an increasing effect on poverty although not statistically significant. The positive sign persists with the addition of the regional and institutional variables in regressions 6.5 and 6.6. We argue that this increase in poverty is the long-term effect of unemployment in the non-thriving/collapsing sectors.

6.7 Handling Endogeneity

One of the challenges of using cross-country studies is the problem of endogeneity. Endogeneity implies that the dependent variable (FDI) as well as the independent

variables (growth, income inequality and poverty) may concurrently be affected by a common denominator. This is undesirable because it causes correlation and also biases the coefficient estimates. To address this problem we use log value of land, East and South Asia as instrumental variables in a three stage least square (3SLS) estimation similar to BDL (1998). The results are summarized in table 7, 8 and 9. These results are similar to the primary SUR results. Overall, our interaction term, FDI x SXP, shows that FDI has a positive effect on growth, income inequality and poverty in resource-endowed countries.

7. CONCLUSION

In this study, we demonstrate that in resource-endowed countries, sector changes and institutional quality, both of which reflect the Dutch disease and Rent-seeking behavior, are mechanisms by which FDI affects growth, income inequality and poverty. We find that FDI has a positive association with growth, income inequality and poverty. While an increasing effect on income inequality and poverty may be alarming for some readers, we caution that these welfare issues are functions of wealth distribution and should therefore be remedied by sound social policies.

Given that growth remains the most effective vehicle for poverty reduction (see Klein, Aaron & Hadjimichael (2001)), governments should use that as a springboard for social and economy-wide development. As Tietenberg (2006) points out, *"the linkage between growth and the poor depends more upon the willingness to transfer than on direct market effects"*. Among other approaches, revenues gained from the natural resource sector should be allocated efficiently. A diverse economy should also be supported on a continuous basis to ensure that no one sector is compromised. Given the

role of institutions it is imperative that good governance and institutions be maintained. Protectionist policies against FDI should also be avoided as this will be counter-productive. While this study has shed light on FDIs performance in resource-abundant economies, it falls short on current data. We recommend that future research involve such data to better assess FDIs impact in this globalization era. We also recommend an investigation into specific use of government revenues from the resource sectors.

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ENDNOTES

1. In this paper, we use the terms "resource-abundant" and "resource-endowed" interchangeably.

2. Van Den Berg (2003) allude to the fact that economic growth is a precursor for economic development and therefore is a good proxy. We in turn use economic growth to imply economic development.

3. The Seemingly Unrelated Regressions (SUR) technique that we adopt from BDL (1998), enables latent factors to affect the dependent variables simultaneously over the two periods. Except for the constant, all the coefficients are constrained in each regression.

4. See SW (1997) and BDL (1998) for explicit explanation and calculation of all variables and data

5. We adopt instrumental variables used by BDL (1998) so as to make our study comparable to such renowned authors

Appendix 1

Variables

Growth: Growth rate calculated as the average annual rate of per capita real GDP

Headcount: [8]The headcount index for the $1 a day poverty line. It shows the share of a population (in millions) living in households with consumption or income per person below the poverty line (ratio)

Gini: Gini Index (ratio); measure of inequality of income or wealth distribution in the country population. It is a ratio that ranges from 0 to 1 with 0 meaning perfect equality (everybody has same income) and 1 implies perfect inequality (one person has all the income). A high gini means high inequality

FDI: Ratio of Foreign direct investment inflows from the period 1970-1979 to the host country's GDP

SXP: Share of exports of primary products in GNP in 1970. Primary products or natural resource exports are exports of "fuels" and "non-fuel primary products". Both numerator and denominator are measured in nominal dollars
.
FDI x SXP: Product of FDI inflows and primary exports share (SXP)

Ln(Gdp):   Log value of real GDP in 1970 and 1980

School: The initial-year level (1970) of average years of the secondary schooling in the male population over the age of 25

Govt Exp: The average share of real government consumption in real GDP in 1970

Blk Mrkt Prem: Black market premium on foreign exchange. Calculated as the difference between parallel exchange market and official exchange market

 Dtt: The average annual growth in the log of the external terms of trade. The external terms of trade is the ratio of an export price index to an import price index

Smx: Share of manufacturing exports in total exports

Gnr: Real growth per-capita in the non-natural resource sector of the economy. Calculated as growth in the sum of real value added in manufactures and service sectors

Lgdpnr;   Natural log of GNP produced in sectors other than the natural resource sector.

Dmx: Change in the share of manufacturing exports in total exports;

Servs: Ratio of value added in services to value added in manufacturing

Investment: Domestic investment rate

Inflation: Inflation rate is a measure of percentage in the GDP deflator

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[8] These measures are based on a poverty line of $32.74 per month at the 1993 PPP. This represents the " $1 a day" poverty line

Fdepth: Financial Depth measured as currency plus demand deposits and other interest bearing liabilities of banks and non-bank intermediaries as a share of GDP

Openess: The fraction of years which the country is rated as an open economy

Safrica: Sub-Saharan African dummy

Laam: Latin American dummy

Rl: Rule of Law index. This variable "reflects the degree to which the citizens of a country are willing to accept the established institutions to make and implement laws and adjudicate disputes" Scored 0 (low) -6 (high).

Bq: Bureaucratic quality index. A high score means "autonomy from political pressure", and "strength and expertise to govern without drastic changes in policy or interruptions in government services." Scored 0-6.

Corr: Corruption in government index. A low score means "illegal payments are generally expected throughout government", in the form of "bribes connected with import and export licenses, exchange controls, tax assessments, police protection, or loans." Scored 0-6.

Re: Risk of expropriation index. Scored 0-10, with lower scores for high risk of "outright confiscation" or "forced nationalization."

Grc: Government repudiation of contracts index. Scored 0-10, with a low score indicating high "risk of a modification in a contract taking the form of a repudiation, postponement or scaling down."

Appendix 2

List of Countries		
Algeria	Guatemala	Pakistan
Argentina	Guyana	Papua New Guinea
Bangladesh	Haiti	Paraguay
Barbados	Honduras	Peru
Benin	Hong Kong, China	Philippines
Bolivia	India	Rwanda
Botswana	Indonesia	Senegal
Brazil	Iran, Islamic Rep.	Sierra Leone
Cameroon	Israel	Singapore
Central African Republic	Jamaica	Sri Lanka
Chile	Jordan	Swaziland
Colombia	Kenya	Syrian Arab Republic
Congo, Dem. Rep.(Zaire)	Korea, Rep.	Taiwan, China
Congo, Rep.	Lesotho	Thailand
Costa Rica	Malawi	Togo
Cyprus	Malaysia	Trinidad and Tobago
Dominican Republic	Mali	Tunisia
Ecuador	Malta	Turkey
El Salvador	Mauritius	Uganda
Gambia, The	Mexico	Uruguay
Ghana	Mozambique	Venezuela
Greece	Myanmar	Yemen, Rep.
	Niger	Zambia
		Zimbabwe

FDI Inflows, By Host Region and Selected Host Economy, 2003-05
(Billions Of Dollars)

Host region/economy	2003a	2004a	2005b	Growth Rates
World	637.8	695	896.7	29
Developed Economies	447.1	414.7	537.2	38
Europe	358.9	258.2	449.2	74
European Union(25)	340	259	445	72
EU-15	327.6	231.4	407.7	76
United Kingdom	27.4	77.6	219.1	182
New10EUMemberStates	12.5	27.8	37.7	36
Czech Republic	2.1	4.5	12.5	181
United States	57	96	106	11
Japan	6.3	7.8	9.4	21
Developing Economies	172.1	243.1	273.5	13
Africa	17.2	18.7	28.9	55
Latin America and Caribbean	48	68.9	72	5
Brazil	10.1	18.2	15.5	-15
Chile	4.4	7.6	7	-8
Mexico	12.8	17.9	17.2	-4
Asia and Oceania	106.9	155.5	172.7	11
West Asia	11.9	17.6	26.5	51
South, East and South East Asia	94.7	137.8	146.2	6
South, East and South East Asia	53.5	60.6	60.3	-0.54
South, East and South East Asia	13.6	34	39.7	17
South, East and South East Asia	4.3	5.3	6	12
South, East and South East Asia	9.3	16.1	15.9	-1

Source: UNCTAD (2005)

TABLE 1: FDI-EXPORT SHARE INTERACTION & CROWDING OUT (SUR)

VARIABLES	DOMESTIC INVESTMENT					
	1.1	1.2	1.3	1.4	1.5	1.6
Ln(GDP)	0.032** (0.012)	0.038** (0.014)	0.039* (0.015)	0.040** (0.014)	0.033* (0.014)	0.040** (0.015)
School	0.013 (0.012)	0.007 (0.012)	0.006 (0.013)	0.007 (0.013)	-0.005 (0.011)	0.008 (0.013)
Govt Exp.	-0.251 (0.120)	-0.150 (0.136)	-0.150 (0.152)	-0.107 (0.141)	-0.111 (0.119)	-0.019 (0.116)
Blk Mrkt Prem.	-0.013 (0.014	-0.022 (0.015)	-0.026 (0.017)	-0.025 (0.016)	-0.014 (0.014)	-0.028 (0.015)
SXP	-0.009 (0.040)	-0.017 (0.049)	-0.020 (0.060)	0.014 (0.058)	0.021 (0.050)	0.135* (0.061)
FDI		0.757** (0.258)		0.812** (0.263)	0.888** (0.235)	0.996* (0.414)
FDI x SXP			-1.274 (1.608)	-1.604 (1.524)	-0.765 (1.381)	-11.462** (3.40)
SAfrica					-0.091** (0.025)	-0.030 (0.029)
Laam					-0.070** (0.017)	-0.051** (0.016)
Institutions						0.006 (0.006)
No. of Obs	48	38	38	38	38	30

*Note: Standard errors in parentheses. **significant at 1%; *significant at 5%*

TABLE 2: FDI-EXPORT SHARE INTERACTION & DUTCH DISEASE (SUR)

VARIABLES	SECTORAL CHANGES		
	2.1	2.2	2.3
	DMX	GNR	SERVS
SXP	-0.280 (0.168)	0.007 (1.406)	-0.147 (1.372)
Sopen	0.105* (0.052)	1.198 (0.373)	
Smx	-0.503** (0.134)		
Gdpnres		-1.573 (0.271)	
Investment		8.041 (2.239)	
Institutions		0.776 (0.172)	
FDI	0.051 (1.247)	-1.563 (8.495)	10.985** (4.085)
FDI x SXP	1.834 (8.681)	-18.654 (65.773)	50.367 (32.706)
No. of Obs	41	28	36

*Note: Standard errors in parentheses. **significant at 1%; *significant at 5%*

TABLE 3: FDI-EXPORT SHARE INTERACTION & RENT-SEEKING (SUR)

VARIABLES	INSTITUTIONS				
	3.1	3.2	3.3	3.4	3.5
	GRC	RE	CORR	RL	BQ
Ln(GDP)	0.438	0.680*	0.463*	0.582*	0.633**
	(0.238)	(0.316)	(0.223)	(0.283)	(0.218)
SXP	-1.502	-2.362	-0.582	-2.265	-0.960
	(0.986)	(1.346)	(0.827)	(1.197)	(0.875)
FDI	5.807	9.524	8.738	7.161	11.725
	(7.075)	(9.695)	(6.106)	(8.685)	(6.417)
FDI x SXP	19.424	-5.575	-16.314	18.778	6.885
	(46.955)	(65.352)	(40.673)	(58.173)	(45.760)
No. of Obs	34	34	35	36	35

*Note: Standard errors in parentheses. **significant at 1%; *significant at 5%*

TABLE 4: FDI-EXPORT SHARE INTERACTION AND GROWTH (SUR)

VARIABLES	PER CAPITA GROWTH (GR)						
	4.1	4.2	4.3	4.4	4.5	4.6	4.7
Ln(GDP)	-0.015** (0.004)	-0.007 (0.004)	-0.012** (0.004)	-0.013** (0.004)	-0.013** (0.004)	-0.007 (0.004)	-0.018** (0.004)
School	0.009* (0.004)	0.006 (0.038)	0.005 (0.003)	0.006 (0.003)	0.006 (0.003)	0.005 (0.003)	0.003 (0.004)
Govt Exp.	-0.030 (0.036)	-0.041 (0.039)	-0.037 (0.033)	-0.045 (0.033)	-0.045 (0.033)	-0.063* (0.030)	-0.027 (0.030)
Blk Mrkt Premium	-0.013* (0.006)	-0.021** (0.006)	-0.018** (0.006)	-0.015** (0.005)	-0.015** (0.005)	-0.013** (0.005)	-0.009 (0.005)
SXP	-0.038** (0.013)	-0.044* (0.018)	-0.037* (0.016)	-0.069** (0.017)	-0.065** (0.018)	-0.058** (0.016)	-0.060** (0.019)
Domestic Inv	0.163** (0.034)		0.120** (0.031)	0.141** (0.028)	0.134** (0.031)	0.097** (0.034)	0.102** (0.038)
FDI		0.280** (0.076)	0.191** (0.071)		0.045 (0.091)	0.054 (0.092)	0.070 (0.139)
FDI x SXP				1.833** (0.494)	1.637** (0.634)	1.634** (0.579)	2.786* (1.316)
SAfrica						-0.002 (0.007)	-0.013 (0.008)
Laam						-0.015** (0.005)	-0.011** (0.004)
Institutions							0.004* (0.002)
No. of Obs	48	38	38	38	38	38	30

*Note: Standard errors in parentheses. **significant at 1%; *significant at 5%*

TABLE 5: FDI-EXPORT SHARE INTERACTION & INCOME INEQUALITY (SUR)

VARIABLES	GINI INDEX (GINI)				
	5.1	5.2	5.3	5.4	5.5
Ln (initial GDP)	0.015 (0.019)	0.011 (0.018)	0.012 (0.018)	0.011 (0.018)	0.013 (0.019)
Blk Mrkt Premium	-0.003 (0.019)	0.002 (0.015)	0.003 (0.015)	0.002 (0.016)	0.002 (0.016)
SXP	-0.009 (0.068)	-0.107 (0.074)	-0.106 (0.075)	-0.108 (0.076)	-0.100 (0.082)
FDI	0.001 (0.338)		0.054 (0.310)	0.045 (0.309)	0.065 (0.319)
Terms of Trade	0.000 (0.000)	-0.001 (0.000)	-0.001 (0.000)	-0.001 (0.001)	0.000 (0.001)
FDI x SXP		4.229* (1.728)	4.310* (1.774)	4.490* (1.846)	4.350* (1.937)
No. of Years Open				-0.009 (0.022)	-0.007 (0.023)
Financial Depth					-0.011 (0.043)
No. of Obs	30	30	30	30	30

*Note: Standard errors in parentheses. **significant at 1%; *significant at 5%*

TABLE 6: FDI-EXPORT SHARE INTERACTION AND POVERTY (SUR)

VARIABLES	HEADCOUNT INDEX (HEADCOUNT)					
	6.1	6.2	6.3	6.4	6.5	6.6
Ln(GDP)	-0.182**	-0.176**	-0.183**	-0.189**	-0.129**	-0.109**
	(0.026)	(0.028)	(0.027)	(0.028)	(0.039)	(0.042)
Terms of Trade	-0.000	-0.001	-0.002	-0.003	-0.003	-0.001
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
SXP	-0.109	-0.232*	-0.341*	-0.400**	-0.341*	-0.114
	(0.093)	(0.109)	(0.133)	(0.142)	(0.140)	(0.142)
Domestic Investment	-0.691**	-0.580*	-0.511*	-0.407	-0.151	-0.460
	(0.226)	(0.248)	(0.238)	(0.259)	(0.256)	(0.246)
No. of Years Open	-0.005	-0.017	-0.036	-0.043	-0.012	0.012
	(0.039)	(0.038)	(0.038)	(0.040)	(0.038)	(0.039)
FDI		-0.428		-0.820	-1.117	-4.379**
		(0.615)		(0.640)	(0.585)	(1.554)
FDI x SXP			4.707	5.826	2.393	5.874
			(2.983)	(3.167)	(3.321)	(6.440)
SAfrica					0.205**	0.197**
					(0.062)	(0.056)
Laam					0.060	0.040
					(0.050)	(0.044)
Institutions						0.0278*
						(0.013)
No. of Obs	41	36	36	36	36	29

*Note: Standard errors in parentheses. **significant at 1%; *significant at 5%*

TABLE 7: FDI-EXPORT SHARE INTERACTION & GROWTH (3SLS)

VARIABLES   PER CAPITA GROWTH

	7.1	7.2	7.3	7.4	7.5	7.6	7.7
Ln (initial GDP)	-0.015** (0.004)	-0.006 (0.004)	-0.012** (0.004)	-0.013** (0.004)	-0.013** (0.004)	-0.003 (0.005)	-0.018** (0.005)
School	0.008* (0.004)	0.006 (0.004)	0.005 (0.003)	0.006 (0.003)	0.006 (0.003)	0.005 (0.003)	0.002 (0.003)
Govt Expenditure	-0.030 (0.036)	-0.040 (0038)	-0.038 (0.033)	-0.045 (0.033)	-0.045 (0.033)	-0.073* (0.032)	-0.032 (0.027)
Blk Mrkt Premium	-0.013* (0.006)	-0.021** (0.006)	-0.018** (0.006)	-0.015** (0.005)	-0.015** (0.005)	-0.011** (0.005)	-0.009 (0.006)
SXP	-0.038** (0.050)	-0.044* (0.019)	-0.036* (0.016)	-0.069** (0.017)	-0.065** (0.018)	-0.057** (0.016)	-0.061** (0.018)
Domestic Investment	0.162** (0.033)		0.120** (0.031)	0.141** (0.028)	0.134** (0.031)	0.091* (0.044)	0.106* (0.041)
FDI		0.274** (0.076)	0.191** (0.070)		0.046 (0.091)	0.021 (0.100)	0.058 (0.136)
FDI x SXP				1.833** (0.495)	1.633* (0.637)	1.598** (0.553)	3.395* (1.299)
SAfrica						0.004 (0.011)	-0.016 (0.010)
Laam						-0.022* (0.088)	-0.121 (0.007)
Institutions							0.005* (0.002)
No. of Obs	48	38	38	38	38	38	30

*Note: Standard errors in parentheses. **significant at 1%; *significant at 5%*

TABLE 8: FDI-EXPORT SHARE INTERACTION & INCOME INEQUALITY (3SLS)

VARIABLES	GINI INDEX				
	8.1	8.2	8.3	8.4	8.5
Ln (initial GDP)	0.022 (0.019)	0.012 (0.018)	0.013 (0.017)	0.012 (0.018)	0.014 (0.019)
SXP	0.007 (0.061)	-0.102 (0.072)	-0.101 (0.073)	-0.102 (0.073)	-0.094 (0.079)
Blk Mrkt Premium	0.004 (0.015)	0.004 (0.014)	0.004 (0.015)	0.004 (0.015)	0.004 (0.015)
Terms of Trade	0.000 (0.000)	-0.001 (0.001)	-0.001 (0.001)	-0.000 (0.001)	-0.000 (0.001)
FDI	-0.143 (0.293)		0.053 (0.058)	0.044 (0.300)	0.066 (0.309)
FDI x SXP		4.133* (1.677)	4.211* (1.732)	4.377* (1.790)	4.225* (1.871)
# of Years Open				-0.008 (0.021)	-0.006 (0.022)
Financial Depth					-0.011 (0.040)
No. of Obs	30	30	30	30	30

Note: Standard errors in parentheses. ***significant at 1%; **significant at 5%

TABLE 9: FDI-EXPORT SHARE INTERACTION & POVERTY (3SLS)

VARIABLES	HEADCOUNT INDEX					
	9.1	9.2	9.3	9.4	9.5	9.6
Ln (GDP)	-0.182**	-0.183**	-0.192**	-0.202**	-0.146**	-0.120**
	(0.025)	(0.028)	(0.026)	(0.027)	(0.036)	(0.038)
Terms of Trade	0.000	-0.001	-0.002	-0.003	-0.002	0.000
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.001)
SXP	-0.112	-0.227*	-0.330*	-0.398**	-0.286*	-0.103
	(0.088)	(0.101)	(0.126)	(0.129)	(0.119)	(0.123)
Domestic Investment	-0.628**	-0.354	-0.438	-0.207	-0.053	-0.351
	(0.211)	(0.231)	(0.230)	(0.386)	(0.228)	(0.217)
No. of Years Open	-0.011	-0.028	-0.047	-0.057	-0.043	-0.005
	(0.036)	(0.036)	(0.036)	(0.036)	(0.033)	(0.034)
FDI		-0.998		-1.161	-1.225*	-4.027**
		(0.585)		(0.588)	(0.552)	(1.350)
FDI x Sxp			5.248	6.222*	2.754	6.135
			(1.524)	(2.849)	(2.825)	(5.412)
SAfrica					0.228**	0.203**
					(0.059)	(0.055)
Laam					0.081	0.052
					(0.049)	(0.231)
Institutions						0.028*
						(0.012)
No. of Obs	41	36	36	36	36	29

*Note: Standard errors in parentheses. **significant at 1%; *significant at 5%*

ABBREVIATIONS

FDI: Foreign Direct Investment

MNCs: Multinational Corporations

GDP: Gross Domestic Product

SUR: Seemingly Unrelated Regressions

3SLS: Three-Stage Least Square

IV: Instrumental Variables