

MITIGATING THE RESOURCE CURSE: A PROPOSAL FOR A MICROFINANCE AND EDUCATIONAL LENDING ROYALTY LAW

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SYNOPSIS: The “natural resource curse” is the phenomenon whereby a country that is rich in natural resources may experience less economic growth than countries lacking natural resources. This occurrence has been blamed on a variety of factors, including weak governments susceptible to corruption, the concentration of economic activity in the petroleum sector, and insufficient investment in education and human capital. Over the last few decades, efforts to combat the curse have focused on “top down” approaches that impose alternative institutions on petroleum states or otherwise police the spending of resource wealth. This paper proposes an alternative “bottoms-up” approach that diverts a small percentage of resource wealth to microfinance and educational lending programs. Similar lending institutions are active in the developing world, and additional funding from a modest royalty could mitigate aspects of the resource curse by diversifying economic activity and increasing investment in education.

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I. INTRODUCTION

“‘Ten years from now, 20 years from now, you will see,’ former Venezuelan Oil Minister and OPEC co-founder Juan Pablo Perez Alfonzo predicted in the 1970s, ‘oil will bring us ruin.’”¹ Indeed, OPEC nations as a whole have seen their GNP per capita decrease by 1.3% per year on average from 1965 to 1998 whereas the rest of the developing world saw its GNP per

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1. Jerry Useem, *The Devil’s Excrement*, FORTUNE Feb. 3, 2003, at 96.

capita increase by more than 2%.² The same holds true for other natural resource riches, where:

[i]t has been observed for some decades that the possession of . . . natural gas, or other valuable mineral deposits or natural resources does not necessarily confer economic growth. Many African countries such as Angola, Nigeria, Sudan, and the Congo are rich in oil, diamonds, or other minerals, and yet their people continue to experience low per capita income and low quality of life.³

International efforts to mitigate the resource curse have tended to favor “top-down” approaches that police how governments spend their wealth. During the same period that such approaches have met with mixed results, the developing world has seen a groundswell of microfinance institutions that are sowing the seeds of economic development in a “bottoms-up” direction, by making small loans to entrepreneurs. Such “bottoms-up” approaches allow individuals to broadly “vote” and decide for themselves where capital is deployed in an economy, rather than relying on the allocation decisions of one, or a few, leaders in government or the international community.

This article discusses how a portion of petroleum (or other natural resource) revenues could be dedicated to similar “bottoms-up” lending programs, particularly for small business and educational lending. These two lending programs would mitigate two of the likely causes of the resource curse: (i) entrepreneurial lending would help support economic growth in sectors other than petroleum; and (ii) educational lending would help to counter a lower level of education that has been observed in resource-rich nations. The article proposes a modest royalty of 1% that would be divided in half between microfinance and educational lending. This level seeks to strike a balance between the desire of governments to fill their treasuries and the need to reach a meaningful number of citizens and thereby contribute to diversifying economic and educational activity.

II. THE NATURAL RESOURCE CURSE

Countries rich in natural resources have paradoxically struggled to grow their economies:

Of 65 countries that can be classified as natural-resource rich, only four managed to attain both (a) long-term investment exceeding 25% of GDP on average from 1970 to 1998, equal to that of various successful industrial countries lacking raw

2. Thorvaldur Gylfason, *Natural Resources, Education, and Economic Development* (Centre for Econ. Policy Research, Discussion Paper No. 2594, 2000), available at <http://notendur.hi.is/gylfason/pdf/dp2594.pdf>. It is also interesting to consider how oil prices and production during this period may have affected the OPEC nations. There was a dramatic swing in oil prices (nominally from \$3 to \$12 with a high of \$37, and inflation-adjusted from \$21 to \$16, with a high of \$99), which indicates that the disparity in GNP is even more significant. *Historical Crude Oil Prices (Table)*, INFLATION.COM (July 21, 2010), http://www.inflationdata.com/inflation/inflation_rate/historical_oil_prices_table.asp.

According to the EIA, oil and condensate production from the OPEC member nations was generally about the same in 1989 (about 21.5 million barrels per day) as it had been in 1970 (about 22.5 million barrels per day), with some member nations seeing production declines and others seeing increases, which indicates that production decline does not appear to have contributed to the GNP disparity. *International Petroleum Monthly (IPM)*, EIA (Jan. 12, 2011), <http://www.eia.doe.gov/ipm/supply.html>.

3. Jeffrey Frankel, *The Natural Resource Curse: A Survey* 1, 3 (Harvard Kennedy Sch. Faculty Research Working Paper Series, Paper No. RWP10-005, 2010), available at <http://www.hks.harvard.edu/m-rcbg/heap/papers/FrankelHEEPDP21.pdf>.

materials and (b) *per capita* GNP growth exceeding 4% per year on average [during] the same period.⁴

Resource-rich nations “score lower on the U.N. Human Development Index, exhibit greater corruption, have a greater probability of conflict . . . have larger shares of their population in poverty, devote a greater share of government spending to military spending, and are more authoritarian than those with more diverse sources of wealth.”⁵ Rather than conferring an economic advantage, the wealth of natural resources may actually be contributing to impoverishment over time.

Similar negative effects from resource wealth have been widely observed over economic history:

[Spain’s] monarchs spent like loons [in the 16th and 17th centuries], expanding the army 15-fold [and] creating an elaborate patronage system While inflation and currency appreciation slowly killed industry and agriculture, a parasitic class of noblemen lived off gold money . . . waiting for the next ship to come in. By the time ships stopped coming, Spain wasn’t able to feed itself, forcing it to declare bankruptcy eight times and finishing it as a world power.⁶

[A]lthough Spain had silver and gold flowing in abundance from the colonies, it still had a weak economy compared with the Netherlands, which was resource poor. The 19th and 20th centuries saw the rise of the Swiss and Japanese economies while resource-rich Russia lagged behind. In more recent times, resource-poor countries such as Korea, Taiwan, Hong Kong, and Singapore have been able to build strong economies at the same time that their resource rich counterparts like Mexico, Nigeria, and Venezuela have been beset with economic calamities.⁷

In the 20th century, King Faisal of Saudi Arabia observed, “In one generation we went from riding camels to riding Cadillacs. The way we are wasting money, I fear the next generation will be riding camels again.”⁸ Throughout history, “[c]ountries that have little or nothing in common ethnically, geographically, culturally, or politically still seem to face the same predicament.”⁹

Studies of the natural resource curse have documented several underlying causes. It appears that these factors contribute, in varying degrees, to suppressing economic growth in resource-rich nations. The principal culprits include:

First, natural resource abundance often results in an overvaluation of the national currency [which can reduce total exports or decrease manufacturing, service and other diversifying activities] Second, natural-resource-rich economies seem especially prone to socially damaging rent-seeking behavior [such as tariff protection and corruption] Third, natural resource abundance may imbue people with a false sense of security and lead governments to lose sight of the need for growth-friendly economic management Fourth, nations that are confident that their natural resources are their most important asset may . . . neglect the

4. Gylfason, *supra* note 2.

5. Thomas I. Palley, *Lifting the Natural Resources Curse*, 80 FOREIGN SERV. J., 54, 54 (2003).

6. Useem, *supra* note 1, at 96.

7. Emeka Duruigbo, *The World Bank, Multinational Oil Corporations, and the Resource Curse in Africa*, 26 U. PA. J. INT’L ECON. L. 1, 2 (2005) (internal citations omitted).

8. Gylfason, *supra* note 2 (internal citation omitted).

9. Duruigbo, *supra* note 7, at 8 (internal citation omitted).

development of their human resources, by devoting inadequate attention and expenditure to education.¹⁰

Effectively, natural resource sectors appear to “crowd out”¹¹ a wide range of other economic activity by drawing away labor and capital and by “reducing the competitiveness of non-resource exports.”¹²

The practical result is that most citizens’ lives deteriorate, rather than improve. In Nigeria, which produces almost two million barrels of oil per day, poverty rates have more than doubled in the last thirty years, from about a quarter of the population to almost 70% of the people “subsisting on less than one dollar per day [, and] [i]ronically, the rural communities which produce about [75%] of Nigeria’s petroleum are among the poorest in the nation.”¹³ Residents living near petroleum facilities often “bear the brunt of the discovery and exploitation of oil while missing out on the benefits.”¹⁴ Environmental degradation affects the “localities surrounding oil installations”¹⁵ by requiring residents to “spend money on items they would have received nearly free of charge,”¹⁶ such as food to replace the loss of subsistence fishing. In these cases, “not only does the local population lose the earning potential of the fishing industry, it also is forced to incur expenses that were not the norm before the advent of oil production in the area.”¹⁷

The compensation to individuals in the developing world for such costs is typically meager. Whereas a landowner in Texas whose property is impacted by oil production receives rents and royalties, and if he is harmed by pollution, has further claims for damages, a similarly situated person in the developing world is compensated indirectly, if at all. Revenues from oil production and damages from pollution tend to be paid directly to the government’s treasury. Individuals seeking redress must then rely on these weak institutions to help them cope with the burdens of natural resource development.

The elusiveness of meaningful participation in the benefits of resource development may cause resentment to build:

In a dilapidated Portuguese cocoa plantation house in Agua Ize, Sao Tome and Principe, residents gather under a rotting roof to avoid the rain. Above their heads, offering a tantalizing glimpse of a world beyond the surrounding dank despair, an old election poster hints at the country’s anticipated oil boom. “It is now!” says the propaganda of the opposition Party of the Democratic Convergence, pledging “better sharing of resources.” Domingas da Costa Frota Pereira, an unemployed

10. Gylfason, *supra* note 2, at 1-2.

11. Frankel, *supra* note 3, at 4.

12. Dwyer Gunn, *Navigating the Natural Resource Curse*, N.Y. TIMES, FREAKONOMICS BLOG (May 26, 2009, 11:19 AM), <http://freakonomics.blogs.nytimes.com/2009/05/26/navigating-the-natural-resource-curse/> (When the “discovery and extraction of natural resources . . . lead[s] to the crowding out of other sectors [it is called] Dutch Disease.”).

13. Duruigbo, *supra* note 7, at 8.

14. *Id.* at 2.

15. *Id.* at 7.

16. Emeka Duruigbo, *Managing Oil Revenues for Socio-Economic Development in Nigeria: The Case for Community-Based Trust Funds*, 30 N.C. INT’L L. & COM. REG. 121, 128-129 (2004).

17. *Id.* at 129.

mother of three children¹⁸ looks up and laughs: “They would put the money in their own pockets,” she says.

III. TOP-DOWN VERSUS BOTTOMS-UP APPROACHES TO MITIGATING THE RESOURCE CURSE

To the extent that the international community has sought to mitigate the natural resource curse, efforts have generally been in the form of “top-down” approaches to establish an alternative bureaucracy to control petroleum revenues or to better police the manner in which the government spends its resources. Alternatively, there have been a few instances of “bottoms-up” approaches, which place some portion of oil revenues directly in the hands of community groups or citizens. An example of the “top-down” approach is the petroleum revenue management trust, such as was attempted in Chad, which requires the government to spend petroleum revenues on specific programs such as public health or infrastructure. An example of the “bottoms-up” approach is the way the State of Alaska pays each resident a dividend from petroleum production of between \$331.20 and \$1,986.86 per year.¹⁹

A. *Top-Down Approaches*

In a perfect world, a nation’s leadership would invest resource proceeds wisely, in a way that maximizes long-term economic development. The reality has been quite different. Oil producing nations:

[H]ave been beset with [] a curse of leadership. Leaders representing different regime types and periods of time have shown similar traits in misgoverning their people and misusing their resources. They have also not introduced the right kind of management structures to ensure the use of these resources in a way that benefits their citizens.²⁰

In light of such failings, one reaction of the international community has been to substitute stronger institutions.

These “top-down” solutions seek to impose new institutions to better manage the funds or to otherwise restrain the tendency of existing institutions to mismanage them.²¹ One such approach is a trust fund:

Domestic governance in oil rich developing countries could be enhanced by creating oil trusts. The board of directors of such trusts would be composed of national and non-national actors. For instance, national directors could be appointed by the country’s parliament or head of state and non-national figures by the World Bank. All oil revenues would be paid into an escrow account in a foreign bank. All transfers from the account would have to be approved by the board of directors of the trust. There might be commitment to using these revenues for specific activities such as health care and education. The trust would monitor the use of the funds after they have been transferred to the national government.²²

18. Emeka Duruigbo, *Permanent Sovereignty and Peoples’ Ownership of Natural Resources in International Law*, 38 G.W. INT’L L. REV. 33 (2006) (internal citations omitted).

19. DEP’T OF REVENUE, PERMANENT FUND DIVIDEND DIV., 2009 Annual Report, available at <http://www.pfd.state.ak.us/forms/AnnualReports/2009AnnualReport.pdf>.

20. Duruigbo, *supra* note 7, at 3.

21. Palley, *supra* note 5.

22. Duruigbo, *supra* note 7, at 37-38 (quoting Stephen D. Krasner).

To the extent a trust utilizes non-citizens as custodians, it can raise issues of sovereignty or paternalism, with the implication that foreigners are somehow more capable of managing the nation's resources. Trust approaches have been used with varying degrees of success in Norway, Kuwait,²³ the United Arab Emirates and the West African nation of Sao Tome and Principe.²⁴

Whether the trustees are local or foreign, such approaches usually assume that the appointed trustees will do a better job than existing governmental institutions. This is not necessarily the case. In Nigeria, various development commissions have been created that were designed to better control the use of oil revenues, but these have done "little to 'channel resources to the oil producing areas [and provided a clear example of] the use of public oil revenues for the benefit of specific individuals at the expense of village communities affected by oil operations on the ground.'"²⁵ A group of appointed trustees may or may not perform any better than the government, thereby exposing the weakness of any top-down approach – the questionable quality (and integrity) of one, or a few, decision-makers.

Even with enlightened decision-makers, a trust approach remains vulnerable to being captured by the government at a later date: "the conditions that generally thwart sound fiscal policy are likely to undermine the effectiveness of funds. Particularly, where institutional capacity – to monitor and exercise accountability – is weak, there is a very serious risk that funds will be 'raided.'"²⁶ As such, the "mere creation of a commodity fund, in itself, does not necessarily do anything to insure that politicians will not raid the fund when it is flush."²⁷

This was what happened to the World Bank's top-down trust fund approach in Chad. The \$3.7 billion Chad-Cameroon pipeline project investment was made contingent on a revenue management plan designed to promote poverty reduction.²⁸ Under the revenue management plan, about two-thirds of the government revenues were "dedicated to the financing of programs in five important sectors namely, education, health, and social services, rural development, infrastructure, and environment and water resources," with the remaining funds divided between a fund for future generations, targeted development in the oil-producing region and general development purposes.²⁹ By 2008, however, the World Bank had withdrawn from the project because "Chad had failed to comply with agreements, in which the government agreed to set aside a chunk of its oil revenues for local communities, health and education."³⁰

23. Xavier-Sala-i-Martin & Arvind Subramanian, *Addressing the Natural Resource Curse: An Illustration from Nigeria* 19 (IMF Working Paper, Paper No. WP/03/139, 2003), available at <http://www.imf.org/external/pubs/ft/wp/2003/wp03139.pdf>.

24. Frankel, *supra* note 3.

25. Duruigbo, *supra* note 16, at 139 (internal citation omitted).

26. Sala-i-Martin & Subramanian, *supra* note 23, at 19.

27. Frankel, *supra* note 3, at 30 (internal citation omitted).

28. Duruigbo, *supra* note 7, at 40-41.

29. *Id.* at 41-42.

30. Lesley Wroughton, *World Bank Pulls Plug on Chad Oil Pipeline Agreement*, REUTERS (Sept. 9, 2008), http://www.reuters.com/article/idUSN09320796_CH_2400.

Petroleum trusts are particularly vulnerable to being reconsidered and captured. When a petroleum discovery lies undeveloped, the government may not be able to realize its value without outside development capital, with such projects typically needing billions of dollars to construct the infrastructure required to produce and/or transport the petroleum. However, once the development is complete, the government becomes the beneficiary of hundreds of millions to billions of dollars a year in petroleum revenues. Once these revenues begin to flow, the project is essentially “self-funding” and the government no longer needs capital assistance from the World Bank, or elsewhere.

In the case of the World Bank’s trust program in Chad, its outstanding loan balance was only about \$66 million by 2008, a year in which Chad’s oil project generated \$1.4 billion of revenues for the government. Paying off the loan early was easy and hardly surprising.³¹ When Chad refused to honor the World Bank’s revenue plan, what recourse did the World Bank have? It could not withdraw the oil wells, processing facilities and pipelines it had previously facilitated.

Other “top-down” proposals have included:

- The Publish What You Pay initiative, which “proposes legislation requiring publicly-listed oil and mining companies to disclose information about payments to government.”³²
- The Extractive Industries Transparency initiative, which “aims to establish voluntary compacts between country governments and companies regarding natural resource revenue transparency” with both governments and companies reporting figures in a “web of double-entry checks.”³³
- The Publish What You Lend initiative, which would mandate disclosure of loans and forward contracts under which governments might incur debts or sell future petroleum revenues, thereby “saddling future governments with the burden of making the interest and loan principal repayments”³⁴ and/or providing a “means by which governments can be stripped of future revenues.”³⁵
- The doctrine of odious debt, which would deem loans made to regimes that are not used for the benefit of the people to be “illegitimate and unenforceable.”³⁶ This could provide incentives for lenders to undertake greater due diligence of countries.
- The 2009 Natural Resource Charter, which proposes a “set of economic principles for governments and societies on how to use the opportunities created by natural resources effectively for development.”³⁷

Such programs generally seek to monitor government expenditures and otherwise impose processes to guide economic policy. While it seems doubtful

31. *Id.*

32. Palley, *supra* note 5, at 4.

33. *Id.*

34. *Id.* at 6.

35. *Id.*

36. *Id.* at 8.

37. Gunn, *supra* note 12.

that any of these processes has had much of a practical impact, commentators do acknowledge that they may be shifting “attitudes in resource-rich developing countries . . . [where the] EITI served as a concrete rallying point for both reformist countries and for reformers in reluctant countries.”³⁸ Economists have pointed out that “[a]n international charter gives people something very concrete to demand: either the government adopts it or it must explain why it won’t.”³⁹

B. *Bottoms-Up Approaches*

In contrast to the “top-down” approach, the “bottoms up” approach seeks to more directly distribute revenues to communities or individual citizens. The “bottoms-up” approach resonates particularly strongly in the context of oil states because “[o]il concentrates resources in the hands of the state. The road to wealth and power for any ambitious individual leads through the offices of the central government, not through individual enterprise or productive economic activity.”⁴⁰ Programs that can create incentives for individuals to engage in productive economic activity outside of the petroleum sector may mitigate such harms, and “may be the best possible development investment, yielding higher returns than infrastructure spending in terms of creating political ownership and economic dynamism.”⁴¹

The potential for the benefits of grassroots approaches is gradually being recognized. In Nigeria, the Niger Delta Development Commission, “unlike its predecessor” has sought a more “bottom-up approach to community development.”⁴² Its Chairman explained that:

unless the people own the process of their development then there is no way anybody can sustain it. That is why we want their involvement. The people must be in the driving seat of their own development. So our own [approach] is to involve them right from conception, design and implementation.⁴³

Notwithstanding these steps, the NDDC does not appear to go far enough. It is “not insulated from partisan politics” and is subject to top-down directives by the President and the National Assembly,⁴⁴ leading to “decision-making about projects for communities [that] is centralized, bureaucratic, clumsy and elitist.”⁴⁵

1. Direct Payments

In contrast, a pure form of “bottoms-up” approach is the direct payment of petroleum revenues to individual citizens. Direct distribution programs seek to bypass the government process, and the risk of corruption:

The payment of a flat oil dividend to all citizens would constitute a progressive redistribution, helping equalize the distribution of income, and providing seed money for poorer citizens to become entrepreneurs. And because the dividend would constitute a regular source of income, it would also provide collateral for

38. *Id.*

39. *Id.* (internal quotations omitted).

40. Duruigbo, *supra* note 7, at 37 (quoting Stephen D. Krasner, *Troubled Societies, Outlaw States, and Gradations of Sovereignty* 41 (July 20, 2002) (unpublished manuscript on file with Duruigbo)).

41. Palley, *supra* note 5, at 13.

42. Duruigbo, *supra* note 16, at 144.

43. *Id.*

44. *Id.* at 147.

45. *Id.* at 148.

ordinary citizens to finance small business investment projects. This, in turn, would stimulate development of credit markets, which are so essential for development.⁴⁶

Alaska's Permanent Fund is the most often cited example of direct distribution. Alaska "mandate[s] the distribution of a portion of the fund's earnings to the residents of the state through dividend payments,"⁴⁷ which amounts to "half of the investment earnings on an equal per capita basis,"⁴⁸ or, about a thousand dollars per person per year. Such a concept also was considered for Iraq⁴⁹ and has been proposed for Nigeria.⁵⁰ Arguably, royalty systems in the onshore United States are an indirect form of revenue distribution to those most affected by petroleum activity, the property owners.

Direct distribution has most recently gained attention in a proposal for Ghana made by the Center for Global Development. Significant petroleum discoveries have been made offshore Ghana since 2007, with the Government's share of oil revenues forecast to exceed \$1 billion per year by 2013.⁵¹ In an open letter to President John Atta Mills of the Republic of Ghana, the Center for Global Development proposed that the nation pay oil revenues directly to individual citizens in an annual payment of approximately \$50 per person.⁵²

The implementation of direct payments in the developing world is more difficult, though. The Ghana proposal acknowledges this, pointing out that direct distributions require "two interlinked but distinct capabilities: personal identification and the transfer of cash."⁵³ Identifying individuals entitled to receive annual payments and delivering such payments may be vulnerable to fraud, or simply impracticable. The impact of "corruption and leakage in the distribution process" in developing nations creates challenges that do not exist, for example, in Alaska.⁵⁴ The CGD Ghana proposal suggests the use of mobile phone networks as a possible means to alleviate these concerns and argues that payments could be "transferred directly to [individuals'] mobile phones."⁵⁵

2. Microfinance Lending

One "bottoms-up" approach that has a well-established track record of success in the developing world is microfinance lending. Such programs "aim to help individuals rise out of poverty [by] [p]roviding access to credit for low income groups that have traditionally been excluded from financial markets [and

46. Palley, *supra* note 5, at 12.

47. Duruigbo, *supra* note 16, at 178.

48. Frankel, *supra* note 3, at 30.

49. Palley, *supra* note 5, at 13.

50. Frankel, *supra* note 3, at 32.

51. Todd Moss, *An Idea to Avoid the Oil Curse: Direct Cash Distribution*, CTR. FOR GLOBAL DEV. (Oct. 19, 2009), <http://www.cgdev.org/content/publications/detail/1422985>.

52. *Id.*

53. Todd Moss & Lauren Young, *Saving Ghana from Its Oil: The Case for Direct Cash Distribution* 18 (Oct. 19, 2009), <http://www.cgdev.org>.

54. Sala-i-Martin & Subramanian, *supra* note 23, at 22.

55. Moss & Young, *supra* note 53, at 18-19. This also would create incentives for "spreading the mobile phone network" which would "have other ancillary benefits" to the economy. Undesirable incentives can be created, too: "if all citizens, young and adult, are entitled to a lump-sum transfer, incentives to increase fertility (and therefore population growth) are introduced into the system." Sala-i-Martin and Subramanian, *supra* note 23, at 20.

thereby] allow[ing] the poor to ‘expand and diversify their economic activity, increase their incomes, and improve their self-confidence.’”⁵⁶ There are an estimated 1,500 microfinance institutions functioning in eighty-five nations in Asia, Latin America, and Africa, with \$18 billion of outstanding credit extended to approximately fifty-four million people, with average loan balances of around \$500 per person.⁵⁷ As many as three billion more similarly situated people may stand to benefit from the extension of microfinance credit.⁵⁸

An example of a microfinance institution is Amhara Credit & Savings in Ethiopia:

With 537,000 borrowers and another 225,000 savers (as of December 2006), Amhara Credit & Savings Institution in Ethiopia is one of Africa’s largest microfinanciers. On overhead it consumes only 5 cents of every net dollar lent (that’s after interest costs are subtracted).

It keeps staff costs low and is frugal on such expenses as electricity. These microlending organizations have low default rates. The share of Amhara’s loans in default or more than 30 days late on interest and principal payments, as of year-end 2006, was 1.5%.⁵⁹

While researchers have struggled to quantify the impact of microfinance programs, some studies have found positive economic results, including *Microfinance and Poverty: Evidence Using Panel Data from Bangladesh*, which:

[E]xamined 1,638 households that participated in two waves of the BIDS - World Bank 1991/92 and 1998/99 survey in Bangladesh. Khandker found that moderate poverty in the sample villages declined 17% between the two waves of the survey, and extreme poverty declined 13%. Among those households that participated in the microfinance programs, the poverty rate declined 20% in the same period, with more than half of the nearly 3% annual moderate poverty decline among participants attributed to the microfinance programs alone. He further found that access to microfinance programs contributed to the reduction of both moderate and extreme poverty of individuals (particularly women) as well as for the village as a whole - where inflow of microfinance funds to rural areas impacted the local economy - and raised per capita household consumption for both participants and nonparticipants.⁶⁰

Microfinance institutions could serve as a model for a new type of “bottoms-up” approach to stimulate other sectors of the economy in resource-rich nations.⁶¹

56. Ian Davis, *Rural Banking: Designing and Effective Legal Framework for Microfinance*, 2 J. BUS. ENTREPRENEURSHIP & L. 394 (2009).

57. *Microfinance: A View from the Fund*, MONETARY AND FIN. SYS. DEP’T 6 (Jan. 25, 2005), available at <http://www.imf.org/external/np/pp/eng/2005/012505.pdf>.

58. Matthew Swibel, *Microfinance Fever*, FORBES, Jan. 7, 2008, available at <http://www.forbes.com/forbes/2008/0107/050.html>.

59. *Id.*

60. Jon Westover, *The Record of Microfinance: The Effectiveness/Ineffectiveness of Microfinance Programs as a Means of Alleviating Poverty*, ELEC. J. OF SOC. 4, 5 (2008), http://www.sociology.org/content/2008/_westover_finance.pdf.

61. The development of a manufacturing economy typically “offer[s] dynamic benefits and spillovers that are good for [economic] growth” through a process that entails “learning by doing.” A “commodity boom that crowds out manufacturing can indeed be harmful.” Frankel, *supra* note 3, at 4, 13.

3. Educational Lending

The success of microfinance also could serve as a roadmap for introducing lending programs focused on higher education. For the most part, “student loans just don’t exist” in the developing world, and “[n]o matter what your grades are, if your family doesn’t have the money, you just can’t go to college.”⁶² One microfinance organization, Vittana, has been building a track record for educational microfinance by “provid[ing] small loans to international students for higher education. Since Vittana began in 2007, its lenders have given more than 150,000 dollars to about 200 international students – often ten or [twenty-five] dollars at a time.”⁶³

Within the developing world, the extension of microfinance to educational lending could serve to mitigate under-investing in education by resource-rich nations. On a variety of measures of education, as a nation’s natural resources increase, educational investment appears to decline: “three different measures of education intended to reflect education inputs, outcomes and participation are all inversely related to natural resource abundance.”⁶⁴ With respect to oil producing countries, “OPEC countries spend less than 4% of their GNP on education compared with almost 5% for the world as a whole.”⁶⁵

One explanation for this effect is that “too many people become locked in low-skill intensive natural resource based industries, including agriculture, and thus fail through no fault of their own to advance their own or their children’s education and earning power.”⁶⁶ Another is that “nations that are confident that their natural resources are their most important asset may . . . neglect the development of their human resources, by devoting inadequate attention and expenditure to education.”⁶⁷

In either case, the failure to invest in human capital matters to economic growth:

[T]ertiary education can help economies gain ground on more technologically advanced societies, as graduates are likely to be more aware of and better able to use new technologies.

. . . .

Our analysis supports the idea that expanding tertiary education may promote faster technological catch-up and improve a country’s ability to maximize its economic output. This research shows that Sub-Saharan Africa’s current production level is about 23 per cent [sic] below its production possibility frontier. We find that a one-year increase in the tertiary education stock would raise the long-run steady-state level of African GDP per capita due to factor inputs by 12.2% This finding therefore indicates that tertiary education plays a recognizable role in promoting economic growth.⁶⁸

62. Samantha Michaels, *Crowd Funded Student Loans: Vittana Brings Microfinance to Campuses Worldwide*, POLITICS DAILY, <http://www.politicsdaily.com/2010/04/28/crowd-funded-student-loans-vittana-brings-microfinance-to-campus>.

63. *Id.*

64. Gylfason, *supra* note 2, at 4.

65. Duruigbo, *supra* note 7, at 7.

66. Gylfason, *supra* note 2, at 1.

67. *Id.* at 2.

68. DAVID BLOOM, DAVID CANNING & KEVIN CHAN, HARVARD UNIV., HIGHER EDUCATION AND ECONOMIC DEVELOPMENT IN AFRICA 28 (2006), available at <http://www.arp.harvard.edu/AfricaHigherEducation/Reports/BloomAndCanning.pdf>.

The diversion of some oil revenues to lending for higher education likely would increase the educational levels in petroleum-rich nations and eventually have a secondary effect of increasing economic growth.

The growth of human capital in a developing country may also improve the political landscape of countries rich in natural resources. Paul Collier, a Professor of Economics and Director of the Center for the Study of African economies at Oxford University, argues that:

[I]f a country is to avoid the “resource curse” it must build an informed civil society that is aware of the kind of issues involved. “There’s no substitute for building a critical mass of informed citizens.” . . . “It doesn’t have to be everybody – sometimes just 10,000 people, but it doesn’t mean just get a good finance minister – it has to be a bigger group than one or two technocrats.” “It means building an informed elite of ministers, civil servants, business people and civil society organizations.”⁶⁹

Professor Collier cites the example of Botswana, which appears to have escaped the resource curse, he says, in part because it has benefited from a “competent civil service from the time its diamond-wealth was discovered in the 1960s.”⁷⁰

There is considerable evidence that education is important for stable democracy:

Across countries, education and democracy are highly correlated . . . In our model, schooling trains people to interact with others and raises the benefits of social participation, including voting and organizing. In the battle between democracy and dictatorship, democracy has a wide potential base of support but offers weak incentives to its defenders. Dictatorship provides stronger incentives to a narrower base. As education raises the benefits of civic engagement, it raises the support for more democratic regimes relative to dictatorships. This increases the likelihood of democratic revolutions against dictatorships, and reduces that of successful anti-democratic coups.⁷¹

As Thomas Jefferson observed in 1820:

I know no safe depository of the ultimate powers of the society but the people themselves; and if we think them not enlightened enough to exercise their control with a wholesome discretion, the remedy is not to take it from them, but to inform their discretion by education. This is the true corrective of abuses of constitutional power.⁷²

IV. PROPOSED ROYALTY LAW DEDICATED TO MICROFINANCE AND EDUCATIONAL LENDING

Whether approaching the conundrum of the resource curse from a “top-down” or “bottoms-up” direction, political realism must be a factor in designing any law that will divert a portion of a government’s resource revenues away from its treasury. The incentives of the political apparatus should not be ignored. How will the current leadership respond to the proposed approach? If leadership changes, what is the likelihood that the legal regime will survive? If

69. Mark Tutton, *Can Africa Break Its “Resource Curse”?*, CNN.COM, Aug. 23, 2010, <http://edition.cnn.com/2010/WORLD/africa/08/23/africa.resource.curse/index.html>.

70. *Id.*

71. Edward L. Glaeser, Giacomo Ponzetto & Andrei Shleifer, *Why Does Democracy Need Education?*, HARVARD UNIV. (Oct. 2005), available at <http://economics.uchicago.edu/download/democracy2.3.pdf>.

72. Thomas Jefferson, available at <http://www.quotedb.com/quotes/2346>.

economic circumstances change, can the approach be adapted, or scaled, to reflect new circumstances?

All of these questions are important. When the costs imposed on the political will of the government are too high, the program is in jeopardy from the outset because “why would they allow [any] proposal [that] would denude them of all money and power.”⁷³ Even if the initial resistance can be overcome, the “larger the size” of the program, the “greater” the temptation of the government to one day overturn it.⁷⁴

This is precisely what happened with the World Bank’s program in Chad. Only 5% of Chad’s oil revenue was available for discretionary spending, and it was not surprising that:

The deal began to fail almost immediately after oil began pumping in October 2003. Much of the first tranche of revenues was spent on the military. The civil society watchdog that was supposed to oversee development expenditures was created on paper but never funded. In 2005, Chad’s parliament abolished legislation committing itself to the Future Generations Fund and increased the ceiling on discretionary spending The Bank was aware that its agreements with Chad would lose their teeth after the loans had been disbursed; it did not anticipate that Chad’s legislators and president would face so little domestic opposition as they broke or abolished legislation that they had passed just a few year’s earlier.⁷⁵

The proposed “bottoms-up” plan to divert substantially all of the Ghana oil revenues to \$50 individual payments faces similar challenges. The anticipated oil revenue that would be diverted to the payment program would amount to 40% of the total revenue received by Ghana in 2009.⁷⁶ Since the discovery was announced, politicians already appear to be spending these future revenues on new policies and funding them through rising budget deficits.⁷⁷ The proponents of the direct distribution plan have responded to such concerns by observing that the government can “get some of the revenues back” by “tax[ing] them.”⁷⁸ The more likely outcome is that the government will keep most of the revenues to fund its programs and policies, thereby greatly reducing the size of the individual payment.

In other words, direct distributions are more likely to be politically acceptable in countries with populations that are relatively small compared with the natural resource wealth. It is probably not a coincidence that Alaska, with a population of less than 1 million people has a successful direct distribution program. How well would such an approach work in Nigeria, which has about 150 million people?⁷⁹ The ratio of available funds to citizens can either render the amount of the direct payment insignificant or result in too great a percentage of the funds being exhausted by the transactions costs of delivering many small payments.

73. Sala-i-Martin & Subramanian, *supra* note 23, at 23.

74. *Id.* at 19.

75. Moss & Young, *supra* note 53, at 10.

76. *Id.* at 15.

77. *Id.* at 11 (“[r]ising deficit spending, perhaps in part due to the anticipated influx of oil revenues, is already contributing to macroeconomic problems”).

78. *Id.* at 14.

79. In populous countries, direct distributions may be more viable if limited to the communities that are directly affected by the natural resources development.

Even if the proposed Ghana distribution program could overcome the initial political resistance, it would remain ever vulnerable to future administrations. “What would stop Ghana from essentially repeating the experience of Chad?”⁸⁰ Since the resource funds flow through the government before being distributed to individual citizens, they are vulnerable to the same problem that Chad experienced, namely that “the executive [can] simply ignore[] the law and spend[] what he wants.”⁸¹ The greater the cost of the program – and direct distributions generally must be costly in the aggregate to achieve reasonably large payments and overcome transaction costs – the more vulnerable it will be over time, as the political actors and economic circumstances change.

In contrast, microfinance and educational lending can be tailored to a lower cost profile because these programs are focused on a small (but productive) segment of the population. The smaller the percentage of the oil revenues that are withheld from the treasury, the easier it will be to establish the royalty law in the first place, and the less vulnerable the royalty law will be to future economic cycles or political change. Moreover, a country with a large population, or a smaller petroleum discovery, could still implement microfinance and educational lending programs, albeit on a smaller scale.

Although the percentage of citizens receiving loans may be small, the opportunity to participate exists for all citizens. The government will have an answer to complaints about “who” benefits from its resource wealth: anyone who wants to start a business or attend college can apply for loans. Externally, the adoption of such programs could marginally improve these nations’ standing among the international community, which could lead in turn to more foreign investment.

The reservation of funds for specific programs such as microfinance or educational lending also can help insulate them from future administrations:

There can be advantages in earmarking the commodity funds for specific good causes such as education, health, or retirement support for a future generation. If the political constituents know how the money is to be spent, they may be more tolerant of the initiative to save it in the first place and more vigilant with respect to transgressions by politicians wishing to raid the kitty to spend on armies or palaces.⁸²

The constituency of recipients of these loans – entrepreneurs and educated citizens – will grow in strength over time and should eventually become a check on those who might abolish them.⁸³

Lastly, there is the question of what level of royalty would be high enough to stand a reasonable chance of enhancing economic growth but low enough to be politically realistic. Consider, for example, a royalty of 1% of a nation’s gross oil production, divided equally between microfinance and educational lending. Thirty-nine countries – including nine in Africa (soon to be ten when Ghana’s Jubilee production reaches its full production) and six in Latin America – have petroleum production of 250,000 barrels per day or higher, which equates

80. Moss & Young, *supra* note 53, at 13.

81. Frankel, *supra* note 3, at 32.

82. *Id.* at 31.

83. *See generally*, Tutton, *supra* note 69.

to about ninety million barrels per year.⁸⁴ In each of these nations, an oil price of \$70 per barrel of oil equates to at least \$6 billion per year of gross petroleum revenues, from which a 1% royalty would generate \$60 million per year – \$30 million for microfinance lending and \$30 million for educational lending.⁸⁵

The injection of \$30 million or more per year into a developing nation's microfinance program would be significant and would likely affect many lives and contribute to economic growth. By way of comparison, the Kenya Rural Enterprise Program "is now one of the most successful microfinance organizations in Africa, with over 110,000 active borrowers and a gross loan portfolio of over \$50 million."⁸⁶ Another example of a microfinance success story is BancoSol in Bolivia, "one of the leading microfinance organizations in Latin America, with over 100,000 active borrowers and a total loan portfolio of over \$160 million."⁸⁷ In the scenario where \$30 million per year was dedicated to funding similar programs, hundreds of thousands of poor entrepreneurs would receive funding in a matter of a few years. Nations with higher levels of oil production, such as Angola, which produces close to two million barrels of oil per day,⁸⁸ could inject up to \$240 million per year into the entrepreneurial economy.

What would be the impact of funding educational lending programs? Assuming it costs on average \$30,000 per year to send an international student to the United States for a college education, an educational lending program of \$30 million per year would fund approximately 1,000 international students. The educational loans would go even further if domestic institutions of higher education could be grown to accommodate more students. Higher education costs for a student at an African university average about \$2,000 per year.⁸⁹ If the royalty funds were used for domestic educational lending, approximately 15,000 additional students per year could be educated.

These levels increase further with higher petroleum production. Angola has about 600 students studying in the United States.⁹⁰ The impact of a one-half percent educational royalty in Angola could increase this number to more than 8,000. At an average cost of \$2,500 per student,⁹¹ the one-half percent royalty could fund enrollment of approximately 100,000 more students at Angolan universities.

84. *World FactBook*, CIA, <https://www.cia.gov/library/publications/the-world-factbook/rankorder/2173rank.html> (last visited Jan. 19, 2011).

85. The proposed royalty would be taken "off the top" before the foreign partner or the government took any other petroleum revenues. If the divisions of revenues elsewhere in the contract remained unchanged, the practical result would be that the government and the foreign partners would share the cost of the royalty pro rata in accordance with their existing mechanisms for dividing petroleum revenue.

86. Davis, *supra* note 56, at 413.

87. *Id.* at 414.

88. *World FactBook*, *supra* note 84.

89. *Financing Higher Education in Africa*, WORLD BANK (2010), available at http://siteresources.worldbank.org/EDUCATION/Resources/2782001099079877269/Financing_higher_education_in_Africa.pdf.

90. *Open Doors 2010 Regional Fact Sheet: Africa*, INST. OF INT'L EDUC., <http://www.iie.org/en/Research-and-Publications/Open-Doors/Data/Fact-Sheets-by-Region>.

91. *Financing Higher Education in Africa*, *supra* note 89, at 23.

Even if the focused benefits of the royalty and its relatively lower cost to the government provide some insulation from political expediency, each program also will need to be carefully designed and managed to avoid fraud. Microfinance programs, like lending from traditional banks, may be subject to “fictitious loans,” “loans to ghost borrowers,” “loans to family, friends and close associates,” “kick-backs,” “not recording incoming payments or recording non-existing payments of interest and principal on ghost loans,” theft, money laundering or the use of proceeds for illegal purposes.⁹² Adequate fraud controls will need to be put in place and enforced, including simplicity of operations, standardization of lending terms, accountability and transparency, monitoring, auditing, and sanctions for violations.⁹³ These fraud controls appear to be working reasonably well in microfinance:

A lot of this finding has to do with the type of activities MFIs are doing, i.e. taking deposits and providing small loans for poor people. In this business model there is not much room for corrupt activities. Even the high borrowing rates are not suitable to attract corruption, as they reflect high costs of handling micro loans. There is simply no fast money to be earned in microfinance.⁹⁴

A modest royalty program that funds such lending activities does not have to be perfect to make a difference. Political pressure will exist. Fraud will be present. What matters is that the royalty and its lending programs survive over time. This is about delivering something instead of nothing. However imperfect, the proposed royalty should increase the number of citizens with access to small business and higher education loans. This is likely to have a long-term impact on the economy as “[i]ndividuals with higher education levels were more likely to engage in entrepreneurial activity, and more educated entrepreneurs created larger numbers of jobs than less-educated entrepreneurs.”⁹⁵ As Muhammed Yunus has observed, the expansion of credit to all households enables “each individual human being [to] have the opportunity to take loans and implement his or her ideas so that self-exploration becomes possible.”⁹⁶

V. CONCLUSION

After the failure of the World Bank’s “top-down” methodology in Chad, it is important for other legal structures to be considered as potential remedies for the resource curse. The success of microfinance in the developing world provides an alternative, “bottoms-up” approach. Governments could enact modest royalty laws from which the proceeds are divided equally between entrepreneurial and educational lending. Such a royalty should meet less political resistance than broader distribution proposals and, just possibly,

92. *Corruption and Financial Crime – An Issue in Microfinance?*, RESPONSABILITY, available at http://www.responsability.com/domains/responsability_ch/data/free_docs/rADiscussionPaper4-CorruptionandfinancialcrimeEN.pdf.

93. See Richard Hook, *Controlling Fraud in Microfinance Programs*, USAID Microfinance Development Brief (June 1995), available at <http://www.microlinks.org> (search “Richard Hook”).

94. *Corruption and Financial Crime – An Issue in Microfinance?*, *supra* note 92, at 3-4.

95. BLOOM, CANNING & CHAN, *supra* note 68, at 19.

96. BETTER WORLD QUOTES, Muhammad Yunus, <http://www.betterworld.net/quotes/microcredit-quotes.htm>.

mitigate the paradox of the resource curse by harnessing the power of individual dreams.