



UNIVERSITI PUTRA MALAYSIA

**ROLE OF FINANCIAL DEVELOPMENT IN OIL-GROWTH NEXUS
IN OIL-PRODUCING ECONOMIES**

MARYAM MORADBEIGI

FEP 2014 1



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UNIVERSITI PUTRA MALAYSIA
BERILMU BERBAKTI

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IN OIL-PRODUCING ECONOMIES**

By

MARYAM MORADBEIGI

**Thesis submitted to the School of Graduate Studies,
Universiti Putra Malaysia, in Fulfilment of the Requirements for
the Degree of Doctor of Philosophy**

April 2014

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Abstract of thesis presented to Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Doctor of Philosophy

**ROLE OF FINANCIAL DEVELOPMENT IN OIL-GROWTH NEXUS
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MARYAM MORADBEIGI

April 2014

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Faculty: Economics and Management

It is expected that possessing the natural resources could faster the pace of growth in natural resource endowed countries. However, history has shown the opposite outcome for some rich natural resource countries like Nigeria, Iran and Venezuela with low rate of growth in output. On the other hand, there are some countries such as Botswana and Netherland that have managed their rich resources appropriately and enjoyed higher rate of growth. Hence, this raises an interesting question as to why some rich resources countries remained under-developed despite the goodness of resource abundance. Why do some resource abundant countries develop better economic development, while others experience resource curse phenomenon? Why are there heterogeneous experiences among resource rich countries?

Recently, financial development not only plays an important role for economic growth, but also is known as one of the sources of resource curse. The main objective of this thesis is to investigate the role of financial development as transmission channel on resource curse in oil-producing economies. The specific objectives are (i) to examine the effect of oil-abundance on financial development in oil producing economies, (ii) to determine the role that financial development plays in mediating the influence of oil-abundance on economic growth, and (iii) to evaluate whether financial development can moderate the adverse effect of oil terms of trade growth volatility on economic growth volatility.

Motivated by the theoretical arguments that declare a negative impact of natural resources on financial development (e.g. see Nili & Rastad, 2007; and Yuxiang&Chen, 2011), the first objective of this thesis aims to provide some empirical analysis on the relationship between oil-abundance and financial development. In particular, using a core sample of 61 oil-producing economies over the period 1996-2010, this thesis has found a significant adverse effect of oil-abundance on the level of financial development. Countries are more reliant on their oil resources, as captured by the value of oil production divided by GDP as well as the share of oil export in GDP, tend to experience lower level of financial development.

The second objective is motivated by the fact that the oil-producing countries with better financial systems have sustained better economic development. Therefore, it is likely that more advanced financial system may moderate the negative effects of oil-abundance in the oil-producing economies. However, academic economists have paid very little attention to the role of financial system in mediating the negative impacts of oil on growth. This thesis seeks to find out whether developing good financial system could assist oil-producing economies to escape the negative association between oil-abundance and growth. To this end, the interaction term between financial development and oil-abundance is included into the growth model. Using the annual data for a core sample of 63 oil-producing countries over the period 1980-2010, the empirical result indicates that the coefficient of interaction term between financial development and oil-abundance is positive and statistically significant. This evidence has suggested the effect of oil-abundance on growth varies in different economies characterized by different level of financial development. An economies with a good financial system can deal more efficiently with the negative impacts of their abundant oil resources on the rate of growth and even can reduce this adverse effect to such an extent that they may turn the curse of oil resource into the blessing and enjoy the positive association between oil and growth in the presence of food financial development.

The last objective of this thesis, which is motivated by theoretical arguments that assert the importance of financial development in reducing the economic shocks on the growth volatility (see e.g. Bacchetta&Caminal, 2000; and Beck et al., 2006), aims to provide some empirical evidence on the relationship between oil terms of trade growth volatility and economic growth volatility in different countries with the different level of financial development. Especially, using the five year non-overlapping standard deviation of oil terms of trade growth index and economic growth over the period 1981-2010 for a core sample of 63 oil-producing countries, this study has found a statistically significant positive effect of oil terms of trade growth volatility on the growth volatility. This indicates that the more volatility in oil terms of trade, the more growth volatility. However, when the interaction term between oil terms of trade growth volatility and financial development is included in the model, the coefficient appears to be negative and statistically significant only when the ratio of liquid liabilities in GDP is used as the measure of financial development. Therefore, the empirical results shows weak evidence that countries with good financial system tend to experience lower growth volatility imposed by volatility in their oil resources.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai
memenuhi keperluan untuk ijazah doctor falasafah

**PERANAN PEMBANGUNAN KEWANGAN DIDALAM NEXUS MINYAK-
PERTUMBUHAN BUKTI DARI EKONOMI PENGELUAR MINYAK**

Oleh

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Adalah dijangkakan bahawa dengan pemilikan sumber asli akan mempercepatkan kadar pertumbuhan di negara yang kaya sumber asli. Bagaimanapun, sejarah telah menunjukkan dapatan sebaliknya bagi sesetengah negara yang kaya sumber asli seperti Nigeria, Iran dan Venezuela di mana kadar pertumbuhan output adalah rendah. Sebaliknya, ada beberapa negara seperti Botswana dan Belanda yang berjaya menguruskan sumber mewah mereka dengan sebaiknya dan menikmati kadar pertumbuhan yang lebih tinggi. Oleh itu, ini membangkitkan satu persoalan yang menarik mengenai mengapa sebahagian negara yang kaya dengan sumber asli kekal kurang membangun walaupun dikurniakan kemewahan sumber. Mengapa sesetengah negara yang kaya dengan sumber asli dapat membangun dengan lebih baik, manakala yang lain mengalami fenomena sumpahan sumber? Mengapa terdapat pengalaman yang berbeza di antara negara-negara yang kaya dengan sumber asli?

Kebelakangan ini, pembangunan kewangan bukan sahaja memainkan peranan penting untuk pertumbuhan ekonomi, tetapi juga dikenali sebagai salah satu punca berlakunya sumpahan sumber. Objektif utama tesis ini adalah untuk menyiasat peranan pembangunan kewangan sebagai saluran transmisi pada sumpahan sumber bagi

ekonomi pengeluar minyak. Objektif spesifik adalah (i) untuk mengkaji kesan limpahan minyak ke atas pembangunan kewangan di ekonomi pengeluar minyak, (ii) untuk menentukan peranan pembangunan kewangan sebagai perantara kesan limpahan minyak ke atas pertumbuhan ekonomi, dan (iii) untuk menilai sama ada pembangunan kewangan boleh memoderasikan kesan songsang kemeruapan terma perdagangan minyak ke atas kemeruapan pertumbuhan ekonomi.

Didorong oleh hujah-hujah teoretikal yang menyatakan kesan negatif sumber asli kepada pembangunan kewangan (contoh; lihat Nili dan Rastad, 2007 dan Yuxiang dan Chen, 2011), objektif pertama tesis ini adalah memberikan dapatan analisis empirikal hubungan di antara limpahan minyak dan pembangunan kewangan. Khususnya, menggunakan sampel teras 61 ekonomi pengeluar minyak melangkaui tempoh dari 1996-2010, tesis ini mendapati ada terdapat kesan songsang yang signifikan limpahan minyak ke atas tahap pembangunan kewangan. Negara-negara lebih bergantung kepada sumber minyak mereka, seperti yang digambarkan oleh pembolehubah nilai pengeluaran minyak dibahagikan dengan KDNK dan juga bahagian eksport minyak dalam KDNK, cenderung untuk mengalami tahap pembangunan kewangan yang lebih rendah.

Objektif kedua didorong oleh fakta bahawa negara-negara pengeluar minyak dengan sistem kewangan yang lebih mapan dapat mengekalkan pembangunan ekonomi yang lebih baik. Oleh itu, adalah berkemungkinan bahawa sistem kewangan yang lebih maju boleh memoderasikan kesan negatif limpahan minyak di ekonomi pengeluar minyak. Bagaimanapun, ahli ekonomi akademik tidak prihatin kepada peranan sistem kewangan sebagai perantara untuk mengurangkan kesan negatif minyak pada pertumbuhan. Tesis ini mencari jalan untuk mengetahui sama ada membangunkan sistem kewangan yang mapan boleh membantu ekonomi pengeluar minyak untuk lari dari kesan hubungan negatif di antara limpahan minyak dan pertumbuhan. Untuk tujuan ini, terma interaksi antara pembangunan kewangan dan limpahan minyak dimasukkan dalam model pertumbuhan. Dengan menggunakan data tahunan bagi sampel teras 63 negara pengeluar minyak melangkaui tempoh dari 1980-2010, hasil empirik mengandaikan bahawa koeffisien terma interaksi antara pembangunan kewangan dan limpahan minyak adalah positif dan signifikan secara statistik. Bukti ini mencadangkan kesan limpahan minyak kepada pertumbuhan adalah berbeza di ekonomi yang mempunyai tahap pembangunan kewangan yang berbeza. Sesebuah ekonomi yang mempunyai sistem kewangan yang mapan dapat bertindak dengan lebih berkesan dan seterusnya mengurangkan kesan negatif limpahan sumber minyak ke atas kadar pertumbuhan, dan mampu untuk menikmati hubungan yang positif di antara minyak dan pertumbuhan bagi negara yang mempunyai pasaran kewangan yang maju.

Objektif terakhir tesis ini, yang didorong oleh hujah-hujah teori yang menegaskan kepentingan pembangunan kewangan dalam mengurangkan kejutan ekonomi kepada kemeruapan pertumbuhan (lihat contoh Bacchetta dan Caminal, 2000; dan Beck et al, 2006), bertujuan untuk memberi beberapa bukti empirik mengenai hubungan di antara kemeruapan pertumbuhan terma perdagangan minyak dan kemeruapan pertumbuhan ekonomi di negara-negara yang mempunyai tahap pembangunan kewangan yang berbeza. Terutamanya, dengan menggunakan lima tahun sisihan piawai yang tidak bertindih indek pertumbuhan terma perdagangan dan pertumbuhan ekonomi melangkaui

tempoh 1981-2010 untuk sampel teras 63 negara pengeluar minyak, kajian ini telah mendapati kemeruapan pertumbuhan terma perdagangan mempunyai kesan positif dan signifikan ke atas kemeruapan pertumbuhan. Ini mengandaikan bahawa lebih tinggi kemeruapan terma perdagangan minyak, lebih tinggi kemeruapan pertumbuhan. Bagaimanapun, apabila terma interaksi di antara kemeruapan pertumbuhan nilai tukar perdagangan dan pembangunan kewangan dimasukkan dalam model, koefisien didapati negatif dan signifikan hanya apabila nisbah liabiliti cecair dalam KDNK digunakan sebagai pengukur pembangunan kewangan. Oleh itu, keputusan empirik menunjukkan bukti bahawa negara-negara yang mempunyai sistem kewangan yang mapan cenderung untuk mengalami kemeruapan pertumbuhan yang disebabkan oleh kemeruapan sumber minyak mereka.



ACKNOWLEDGEMENTS

I would like to express my sincere gratitude to my dear supervisor; Assoc. Prof. Dr. Law Siong Hook for his continues supports, enlightening and patient guidance during my study. I am also grateful to Prof. Dr. Muzafar ShahHabibullah, Assoc. Prof. Dr. Lee Chin and Prof. Dr. Masnor Haji Ibrahim members of my supervisory committee for their generosity, and encouragement to complete this study.

Special thanks to my dearest parents and siblings for their understanding, endless love and caring during my study. Your encouragement when the times got rough are much appreciated and duly noted. It was a great comfort and relief to know that you were there for me and willing to provide everything for me while I completed my work. My heartfelt thanks.

I take this opportunity to express my profound gratitude and deep regards to my friends for their constant encouragement without which this assignment would not be possible. I wish to offer my special thanks to Dr. Bede ObinnaAmadi. The blessing, help and guidance given by him time to time shall carry me a long way in the journey of life on which I am about to embark.



I certify that a Thesis Examination Committee has met (date of viva voce) to conduct the final examination of **Maryam Moradbeigi** on her **Doctor of Philosophy** thesis entitled “**Financial Development and the Oil-Growth Nexus In Oil-Producing Economies**” in accordance with the Universities and University College Act 1971 and the Constitution of Universiti Pertanian Malaysia [P.U.(A) 106] 15 March 1998. The committee recommends that the student be awarded the Doctor of Philosophy.

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