博士論文審査結果報告
Report on Ph.D. / Doctoral Dissertation Defense

National Graduate Institute for Policy Studies (GRIPS)

Professor Roberto Leon-Gonzalez

審査委員会を代表し、以下のとおり審査結果を報告します。

On behalf of the Doctoral Thesis Review Committee, I would like to report the result of the Doctoral Dissertation Defense as follows.

学位申請者氏名 Ph.D. Candidate	Paul Owusu Takyi
学籍番号 ID Number	PHD15104
プログラム名 Program	Policy Analysis Program
審査委員会 Doctoral Thesis Review Committee	主査 Main referee　LEON-GONZALEZ Roberto　主指導教員 Main Advisor 審査委員 Referee　PORAPAKKARM Ponpoje　副指導教員 Sub Advisor 審査委員 Referee　HSU Minchung　副指導教員 Sub Advisor 審査委員 Referee　恒川　惠市 TSUNEKAWA Keiichi　博士課程委員会委員長代理 Acting Chairperson of the Doctoral Programs Committee 審査委員 Referee　藤原　一平 FUJIWARA Ippei 慶應義塾大学　外部審査委員 External Referee
論文タイトル Dissertation Title (タイトル和訳)※ Title in Japanese	Effects of Monetary Policy, Fiscal Policy, and Health Shocks on Household Outcomes: the Role of Financial Inclusion 金融政策、財政政策と高額医療費が家計支出へ与える影響：金融包摂の役割
学位名 Degree Title	博士（開発経済学）Ph.D. in Development Economics

論文提出日 Submission Date of the Draft Dissertation	2020 年 2 月 14 日	論文審査会開催日 Date of the Doctoral Thesis Review Committee	2020 年 3 月 13 日
論文発表会開催日 Date of the Defense	2020 年 3 月 13 日	論文最終版提出日 Submission Date of the Final Dissertation	2020 年 8 月 19 日
審査結果 Result	（合格 Pass）	不合格 Failure	

※ タイトルが英文の場合、文部科学省に報告するため、和訳を付してください

Please add a Japanese title that will be reported to MEXT.

1. 論文要旨 Thesis overview and summary of the presentation.

The final defense was the 13th of March at GRIPS, but because of the pandemic attendance was limited to the examiners, who sat down separately from each other. The candidate first gave a presentation of about an hour, and after that the examiners gave comments and asked questions to the candidate for about 30 minutes.

The thesis has three research articles, and two of them have been already published in international refereed journals (Taylor & Francis and Elsevier). The third is also already under submission. This thesis aims at examining the role financial inclusion as a means by which households could insulate themselves against the effects of adverse economic shocks. In addition, it evaluates the implications of limited financial market participation for the conduct of monetary and fiscal policies in Sub-Saharan African (SSA) economies and Ghana in particular.

The first study, designated as chapter 3 of the dissertation, examines the effectiveness of monetary policy and its implications for financially included and excluded households through an estimated New-Keynesian dynamic stochastic general equilibrium (DSGE) model. Using time series data spanning 1985 to 2016, it estimates the model for Ghana, Gabon, Lesotho, and Mauritius, using a Bayesian approach. The results show that a contractionary monetary policy tends to have differentiated impacts; it decreases the consumption of financially excluded households more than that of financially included ones. Also, the analysis suggests that a positive monetary policy shock does perform its intended role of significantly reducing inflation and output, despite a sizeable fraction of the population being financially excluded.

Chapter 4 presents the second study where it develops and estimates a standard New-Keynesian DSGE model for the Ghanaian economy, for the analysis of the impact of government spending, consumption tax, and labor income tax shocks on household

consumption and working hours. It also applies the model to examination of the effects of fiscal policy shocks on key macroeconomic variables in the Ghanaian economy. The model's parameters are estimated through a Bayesian approach using time series data from 1985 to 2017. The results show that a positive government spending shock has an expansionary effect on the consumption of financially excluded households but has a decreased effect on that of fully financially included ones. Furthermore, it finds that positive consumption and labor income tax shocks decrease consumption by financially excluded households more than that by financially included ones. To mitigate the negative effect of those shocks on their consumption, financially excluded households increase their working hours while their counterparts rather reduce their working hours. Overall, the study finds that increased government spending has a positive effect on consumption, output, employment, and inflation but turns to crowd-out consumption when wages are sticky.

The third study is presented in chapter 5 where it explores the role of financial inclusion in the mitigation of the effects of a health shock at the household level. To that end, it examines empirically the effect of financial inclusion on household working hours and health care utilization, using round six of the Ghana Living Standard Survey (GLSS-6) data and applying three estimation techniques: ordinary least squares (OLS), fixed effects (FE), and instrumental variable with fixed effects (IV-FE). The study finds that a health shock does decrease household working hours and increase the likelihood of health care utilization. However, it finds that, faced with a health shock, households who are financially excluded see their working hours decrease more than those who enjoy full financial inclusion. Also, financial inclusion increases the likelihood of health care utilization when households experience a health shock. It finds evidence that loan acquisition (borrowing) is one of the main mechanisms by which households can insure themselves against a health shock.

Generally, the findings from the three empirical studies in this dissertation support the

financial inclusion agenda of policymakers in Ghana and many other countries. Thus, efforts to ensure full financial inclusion are recommended. Those efforts will increase the probability of households using the financial sector as a means of insulating themselves against the effects of adverse economic shocks. Also, they will be helpful for monetary and fiscal policies to continue playing their usual roles in the Ghanaian economy.

2. 審査報告 Notes from the Doctoral Thesis Review Committee (including changes required to the thesis by the referees)

All the examiners provided a list of comments for revisions. The candidate revised the thesis taking into account all comments, and provided an explanation to each examiner of how the comments had been taken into account. For brevity I only provide here some of the comments, and answers from the candidate, which were as follows:

Chapter 3

1.   Why are these 4 countries chosen?

Response: As explained in the introduction, the four countries were chosen from middle-income countries in Sub-Saharan Africa based on data availability.

2.   Why are numbers zero at the last row in all tables of variance decomposition?

Response: It shows non-significance of contribution of labor income tax and labor supply shocks in explaining the macroeconomic variables in the Ghanaian economy, which could partly be attributed to large informal sector in the Ghanaian economy.

3.   Are there any significant structural breaks in your sample?

- Is there any change in the monetary policy regime?

- Has the target level of inflation been fixed and constant throughout the period?

Response: Yes. For example, Ghana operated adopted inflation targeting monetary policy somewhere around 2000 with official year being 2007. We estimated out

model from 2001Q1 to 2016Q4 and observed that the dynamic response of macroeconomic variables to monetary policy shock were the same.

4.　　　There are too many unidentified mechanisms in the model for more rigidities, such as capital, capital adjustment cost, nominal wage rigidities, since the estimation does not use the data for capital (investment) and wages. Why not trying to estimate much a simpler model without capital and wage dynamics but with price indexation (and habit as already incorporated).

Response: That is right. We, however, believe that, even with a simpler model, the dynamic responses of consumption of financially excluded and included households would not change to affect the main objective of the dissertation and the conclusion drawn.

5.　　　I would like to see how the posterior distributions of the parameters are significantly different from the prior distributions so that we can judge whether the data is properly used to update the parameter estimates.

Response: We have shown this by displaying the prior and the posterior distribution of the parameters in Appendix 3B for all the four countries.

6.　　　Is the external sector not important in these countries?

- There is no exchange rate dynamics.

- Are they well-approximated as closed economies?

Response: We have indicated that as a limitation of the study (please see section 6.4). However, as we explained in the same section, by introducing the external sector, which comes with exchange rate dynamics, the consumption response of financially included and excluded households to monetary shock would not be affected. This is because exchange rate will influence prices equally for both households.

3. 最終提出論文確認結果 Confirmation by the Main Referee that changes have been done to the satisfaction of the referees

The candidate revised the thesis following the comments from the examiners. The candidate provided an explanation of how each comment had been taken into account. The main adviser was satisfied with the revisions, and sent them to the other examiners, who did not suggest further comments. A software for plagiarism (Turnitin) was used and revealed no problems.

4. 最終審査結果 Final recommendation

The doctoral thesis review committee recommends that GRIPS award the degree of Ph.D. in Development Economics to Mr. Paul Owusu Takyi.