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

政策研究大学院大学

教授　池田　真介

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 Degree Committee, I would like to report the result of the Ph. D. / Doctoral Dissertation Defense as follows.

学位申請者氏名 Ph.D. Candidate	竹田　竜哉 TAKEDA, Tatsuya		
学籍番号 ID Number	PHD12201		
プログラム名 Program	政策分析プログラム Policy Analysis Program		
審査委員会 Degree Committee	主査 Main referee	池田　真介 IKEDA, Shinsuke	主指導教員 Main advisor
	審査委員 Referee	HSU, Minchung	副指導教員 Sub advisor
	審査委員 Referee	藤本　淳一 FUJIMOTO, Junichi	副指導教員 Sub advisor
	審査委員 Referee	園部　哲史 SONOBE, Tetsushi	博士課程委員会委員長 Chairperson of the Ph. D. Programs Committee
	審査委員 Referee	上田　晃三 UEDA, Kozo (早稲田大学 教授/ Waseda University)	外部審査員 Referee from outside institutions
論文タイトル Dissertation Title	A Fiscal Perspective on the Government Debt Sustainability and Risk of Monetary Authority's Independence: Theory and Empirical Analysis for Japan 政府債務の持続可能性と金融当局独立性のリスクに関する FTPL による考察		
学位名 Degree Title	博士（公共経済学）/ Ph.D. in Public Economics		
論文提出日 Submission Date of the Draft Dissertation	平成 27(2015)年 12 月 18 日	論文審査会開催日 Date of the Degree Committee Meeting	平成 28(2016)年 1 月 22 日
論文発表会開催日 Date of the Defense	平成 28(2016)年 1 月 22 日	論文最終版提出日 Submission Date of the Final Dissertation	平成 28(2016)年 2 月 12 日
審査結果 Result	合格 pass		

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

This thesis investigates several issues of the government debt sustainability and independence of the monetary authority from the fiscal authority, particularly focusing on Japanese experience in the last two decades. Chapter I is an overview of the current situation in Japanese debt management from in terms of the growth of debt, possibility of fiscal inflation, and coordination of monetary and fiscal policies. Chapter II is a review of the Fiscal Theory of the Price Level (FTPL), which is summarized by (a) the standard quantity theory of money, and (b) the fiscal equation. The latter describes the monetary base plus the government debt per unit of the price level as the present value of future government surpluses. The controversies and discussions about (b) and the role of money in this FTPL framework are summarized in Chapter III. Chapters IV and V constitute the main contributions of this thesis. Chapter IV depicts an FTPL-based empirical study of the Japanese debt. The student adopts two empirical strategies: (1) The Fiscal Investment and Loan Program (FILP) is included in the assessment of the scope of the government of Japan and its debt. (2) The government surplus is measured by an implied economic surplus, rather than a primary balance. Combining these two strategies in the vector autoregressive framework, the student shows that the Japanese debt had been stable in the first decade in 2000s, and consistent with the FTPL prediction. This is distinct from Hoshi and Ito's 2012 NBER working paper, in which Japan is a "puzzle" and defies a standard explanation. Chapter V introduces the framework of interacted monetary and fiscal authorities, given by Leeper and Walker's 2012 NBER working paper. The student proposes a model when each of two authorities behaves as if it dominates another, and names it a Lack-of-Coordination (LoC) regime. The student suggests that this regime is stable, in the sense that a deviation from it to either the true fiscal dominance or monetary dominance is unlikely to happen. Based on numerical simulations, the student suggests that in this LoC regime, (i) the hawkish monetary policy may make the inflation path more volatile and delay the reversion of the economy to its steady state, and (ii) it may lead to the "run" on government corresponding to negativity of the present value side of (b), which is caused by a recent government deficit in conjunction with a large discount factor. Chapter VI discusses the results in the thesis and concludes the entire project.

During the final defense, the candidate presented for about one hour and subsequently the referees raised questions and comments.

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

The referees (in alphabetical order of their surnames) made the following comments before, in and after the defense based on the previous manuscript in December 2015 and the presentation in January 2016.

Professor Junichi Fujimoto

1) No need for detailed justifications of the FTPL, especially in the empirical part.
2) Concern about the "doom's day" scenario: is it consistent with rational expectation? If people suspects its possibility, why not happen right now?
3) The manuscript is very long. Need more careful introductions to empirical and theoretical models, rather than just citing, e.g., "Leeper and Walker (2012)".

Professor Minchung Hsu

1) On a generalizability of a "Japan puzzle". Is it discussed in any other studies? Better to provide some discussion about how important it is. Also need a brief discussion about any other possible explanations for this puzzle.
2) Is LoC story really applicable to Japan? In the history, inflation seems stable in Japan.
3) About the empirical part: aren't there any competing/alternative theories or empirical approaches? If properly accounting for FILP in these alternative frameworks may benefit, too, the core contribution of the empirical part is not its augmented support for the FTPL but the using FILP side of the government.

Professor Shinsuke Ikeda

1) A concern about the estimation of RHS in the fiscal equation. The presented result indicates mis-specified nature of the VAR model.

Professor Tetsushi Sonobe

1) "Government" may involve many, politically untouchable regions. Need to discuss these political economic aspects of the dissertation.
2) Many scenarios of government scope, operation, and transfers (e.g., privatization) should be discussed.

Professor Kozo Ueda (Referee outside GRIPS)

1) In Chapter III, Bassetto (2002) should be cited. This paper is the strongest and most convincing criticism against the FTPL.

2) Page 85 in Chapter IV: ϕ_t (the growth rate of government debts' nominal values) Discussions seem inappropriate because you assume exogenous ϕ_t. If it is exogenous, it becomes inconsistent with equation (39) under rational expectations.

3) Section V.6 Numerical example and potential cooperation. I suggest eliminating this section entirely. This game theoretic model is too ad-hoc. Because there is no structure, you can produce anything by setting arbitrary numbers.

4) III.2 on page 34: "What is the Price Level?" This section is potentially interesting, but not quite clear.

5) Page 51: Financial Assets. Are the foreign securities held by the FILP included? Relating this, how do you incorporate the pension on both asset and liability sides?

6) Page 54: To calculate the real return r, do you use ex post (next period) or exante (expected) inflation? More explanations are needed. Moreover, nominal interest rates are predetermined at the time of issue, and thus, different from those of today. How do you take account of this?

7) Section IV.4 VAR analysis. Discussions are extremely hard to follow, in particular, after equation (10). This section needs to be thoroughly restructured. How did you derive equation (10)? More explanations are needed. How did you derive equation (14)? Unknown values are two eta's, while there are three restrictions in (13). Do you also solve beta? Then, how about beta in the equation below (11)?

8) Page 64: You assume that an expected shock for fiscal surplus, epsilon, is zero. This assumption is crucial to obtain F in (17). But, is this plausible? To put differently, this assumption means that people do not expect an increase in tax in the future. More explanations are needed.

9) Section IV.4(c) Inflation model. You assume a monetary policy rule by neglecting the zero lower bound of nominal interest rates. This assumption affects your results greatly. More explanations are needed. How did you derive equation (26) in sum? Since this seems a key equation in the chapter, intuitive accounts and discussions are needed. Moreover, what did you do to the left-hand side variable (expected inflation in the previous period) in your estimation?

10) Page 73: I have a strong doubt on the following argument, " (Cochrane (1999)) touches on the quantity of the outstanding government debts as a factor for the discount rates. That is, the real discount rate should increase if the government issues more debts."

11) Figures IV-1 and thereafter: data sources should be briefly noted.

12) It is not clear what exactly the contributions of this dissertation are.

13) Concerns about the FILP data, as there may be "hidden debts".

14) Why incorporate only financial assets? Why not pension? Why not physical assets? Need to explain or admit limitations and caveat in the data selection.

15) Concern about the Lack-of-Coordination (LoC) model: Leeper (1991) shows indeterminacy of equilibrium paths if both fiscal and monetary authorities take "aggressive" stances. Isn't it corresponding to LoC? If so, then LoC has no determinant equilibrium path.

16) Unclear what the "expectation" stands for. Is the interest rates ex-ante, or ex-post?

Professor Yosuke Yasuda (in the audience of the final defense)

1) It is not clear how the game-theoretic model of LoC is connected to any other parts of the dissertation.

2) Ordinal or cardinal ordering in the numerical examples: aren't ad-hoc settings driving the results?

3) Need a careful distinction between LoC and Sargent-Wallace's chicken game. How are they related?

As the list above suggests, his manuscript and presentation invite many comments, particularly from the outside referee. Some of these are quite challenging.

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

Mr. Tatsuya Takeda has revised his thesis to incorporate the vast majority of the comments and challenges by the referees and has provided explanations of the changes he has made, as summarized in the separate file I attach to this report. The referees are satisfied with the revisions.

4. 最終審査結果 Final recommendation.

I recommend that the degree of Ph.D. in Public Economics should be awarded to Mr. Tatsuya Takeda.