

## Retrospectives on Public Finance: An Introduction to the Issues

The purpose of this chapter is to introduce both the subject matter of this book and the papers within it. *Retrospectives on Public Finance* contains the edited proceedings of a conference held at Carleton University, Ottawa, Ontario, Canada, in May 1989, which brought together scholars and policy makers from Canada, Australia, Japan, and the United States for a retrospective on the discipline of public finance, in honor of one of its most famous practitioners, Carl Sumner Shoup, McVickar Professor of Political Economy Emeritus at Columbia University.

The 1989 conference marked the twentieth anniversary of Shoup's 1969 major treatise, *Public Finance* (Chicago: Aldine Publishing). The date also marked the anniversaries of the Shoup Mission to Japan in 1949–50 and the Shoup Mission to Venezuela in 1958–59. From his early work in the U.S. Treasury Department, through the Shoup Tax Missions to Japan, Venezuela, and Liberia, from his ongoing interest in public expenditures and size of the government sector, through the value-added tax and taxation of multinationals, Carl Shoup has successfully intermingled theoretical advances in public finance with practical advice to policy makers around the world.

Although the conference was not formally in honor of Richard A. Musgrave, his great contributions to the discipline, the similarities in his and Shoup's approaches to public finance, and the fact that 1989 is the thirtieth anniversary of his pathbreaking treatise, *The Theory of Public Finance: A Study in Political Economy* (New York: McGraw-Hill), are also marked by this book.

These events, the publication of two important treatises and the conclusion of two tax missions, had a substantial impact on the theory and practice of public finance from the 1930s through the 1980s. Carl Shoup and Richard Musgrave, both leading world figures, represent a branch of public finance that we can call the "prescriptive" or "political

economy” school. This school is older than the optimal tax and the deadweight loss literature one associates with Harberger, Atkinson, Stiglitz, and others. The Shoup-Musgrave branch combines rigorous theory with practical policy advice. Public finance as practiced by these economists is a distinct approach, one that is prescriptive, hands-on, and firmly rooted in the political economy tradition that economics must be applicable to real world problems. These economists believe that fiscal institutions are important to our understanding of public finance and that theory and practice must interact for success in making democracy function.

Carl Shoup and Richard Musgrave have trained and been colleagues with over two generations of public finance specialists, including Richard Bird, Sijbren Cnossen, John Due, Lyle Fitch, Irwin Gillespie, John Graham, Richard Goode, Lowell Harriss, John Head, Peggy Musgrave, Charles McLure, Jr., Hirofumi Shibata, and William Vickrey, to name just a few. Their research spans the entire field of public finance, from the theory of public goods to the integration of the personal and corporate income taxes to macroeconomic policy to fiscal harmonization. These economists believe in a practical approach to public finance, one that uses theory to design realistic fiscal structures.

The purpose of the conference was to take a retrospective look at this political economy branch of public finance in honor of Carl Shoup’s contribution to it. The participants were asked to review the literature of this school and to assess its relevance to current problems in public finance theory and policy making. Each participant was asked to focus on the long view: to address the issues of what was really important, what has stood the test of time, what this branch can say to modern public finance problems, what advice can it offer to developing countries and to tax reform movements. Each paper was to be both a backward and a forward look. Given the current round of worldwide fiscal reforms (e.g., the United States, Canada, Japan, Australia, the United Kingdom, the European Community), such a retrospective look seemed particularly appropriate.

## Outline of the Book

*Retrospectives on Public Finance* is drawn from the papers and discussant comments presented at the conference which were subsequently

revised and edited for inclusion in this book. It is intended to offer the economics profession surveys that are useful, not only to academics and their graduate students, but also to practitioners of public policy in both developed and developing countries. The goal of the book is to help improve the level of policy making and economic analysis applied to public policy issues through a careful review of the prescriptive school of public finance.

Retrospectives can be a particularly effective research and learning tool. They are useful to academics, policy makers, and graduate students who wish to gain an understanding of a particular field of study. Through taking a long-run view of a field's development, authors can isolate key contributions, areas where further work needs to be done, and relevant work that has been lost to current researchers. Second, assessments of previous fiscal reform missions can be helpful in designing successful new reform missions. Such assessments link the importance of "architecture" and "engineering," to use Carl Shoup's words, to successful fiscal reform. Lastly, bringing together the senior statesmen in the profession with younger academics can lead to fruitful exchanges, linking the practical experiences of the older generation with theoretical advances of the younger group.

This volume is divided into six parts, consisting of seventeen chapters and seven comments. It is framed by two chapters, this one (Part I), which summarizes the papers and their themes, and the last chapter (Part VI) written by Richard Musgrave, which offers a personal view of the history of public finance from the 1930s through today. Part II opens with a personal retrospective by Carl Shoup on the relative importance of tax architecture, engineering, and administration in successful fiscal missions. Shoup's paper is followed by three chapters assessing the success/failure of the Shoup missions and the lessons these missions offer policy makers. Part III looks at the personal and corporate income taxes, the value added tax, and the role of the property tax in the fiscal system. Part IV contains papers on local public goods, excludable public goods, and merit wants. Part V deals with impacts of the tax structure on expenditure growth, international public finance issues, compensatory fiscal policy, and social security and public debt. The range of topics covered in *Retrospectives on Public Finance* is very broad, as befits a book designed to assess the political economy school of public finance and Carl Shoup's role within it. A brief outline of the key points of each of the chapters is provided below.

## The Shoup Tax Missions

Carl Shoup's paper on "Melding Architecture and Engineering" asks a question he considers neglected but important: How should a tax mission allocate its resources between tax architecture, engineering, and administration? Shoup defines tax architecture as the choice of taxes to form a country's revenue base and the outlining of the essential features of each tax. Tax engineers must decide each of the substantive issues within the tax. Tax administration is concerned with how to implement the provisions in the tax law formulated by the architects and engineers. He argues that, contrary to some critics, tax architecture is an essential task for tax missions; while tax engineering and administration are both of growing importance.

Malcolm Gillis's paper on "Legacies from the Shoup Missions" notes that both Richard Musgrave and Carl Shoup are synonymous with tax missions; both are economists who can be referred to as "tax doctors." Gillis argues that the Shoup mission to Japan was a prototypical, path-breaking study since it was the first mission where distinguished public finance academics applied theory to the practical problem of reforming an entire tax system. All four of Shoup's missions emphasized tax fairness, the relation between tax systems and inflation, and the centrality of good tax administration in public finance. Gillis concludes that the legacy of the Shoup missions was not only the actual measures enacted, but also the impact of the missions on defining the agenda for tax reform in other nations.

"The Impact of the Shoup Report on Japanese Economic Development" by Minoru Nakazato notes that the report has influenced Japanese tax policy for nearly forty years. Nakazato concentrates on the tax reform aspects and asks whether the recommendations were appropriate at the time. He notes that fairness and the ideal of a comprehensive income tax were basic features of the report. Nakazato faults the mission for possibly encouraging overincorporation within Japan as a tax-minimizing technique.

Charles McLure, in "Income Tax Reform in Venezuela: Thirty Years after the Shoup Mission," compares the recent World Bank report on the income tax system in Venezuela with the report of the 1958–59 Shoup mission, which he considers a classic in the field. McLure focuses on the tax engineering aspects and argues that good tax advice has had little impact in Venezuela and that little has been learned from mistakes. He

attributes this to the absence of a tax research group, the lack of political will to introduce reforms, and excessive reliance on high petroleum rents as a source of tax revenue. McLure concludes that tax reform may only occur when governments are forced by revenue needs to make unpopular choices.

## The Tax Mix

Richard Goode in “Changing Views of the Personal Income Tax” describes and comments on changing views of the proper form and role of the personal income tax in the economy. Goode deals with three crucial issues: the definition of the base of the tax, the appropriate rate structure, and the choice between income and expenditure taxes. The paper uses Carl Shoup’s taxonomy of consensus and conflict criteria to identify three conflict and four consensus variables that influence discussion of income tax rates. The conflict variables all deal with progressivity of the rate structure: the exemption of incomes below poverty level, mild progressivity over middle range, and steep graduation at high income levels. The consensus criteria are general fiscal goals: adequate revenue, avoidance of excessive interference with macro goals and macro stability, and practicable administration and compliance. Goode then compares the personal income tax to the expenditure tax in terms of the consensus criteria and argues that the income tax is still superior. He concludes that the academic view of the personal income tax has changed greatly because of economic analysis and the economic environment.

In “The Corporate Income Tax and How to Get Rid of It,” William Vickrey notes that the corporate income tax faces the widest gap between political popularity and professional esteem. He attributes this gap to the public belief that the tax is borne by someone else, while economists disagree on the incidence of the tax. Vickrey argues that the tax in the United States was changed in 1936 without a clear underlying rationale and that its structure increases the cost of equity capital for firms, having a twofold depressing effect on business investment. In addition, he notes that the tax discriminates in favor of debt-financed and speculative investment, pressures firms to increase leverage ratios, and encourages leveraged buyouts and tax-driven mergers. Uncertainty as to its incidence makes it difficult to calculate benefits and costs, while the foreign tax credit mechanism creates an incentive for other nations to adopt similar taxes in order to take advantage of the credit. Vickrey’s

solution is a flat tax levied on a source basis and a progressive tax levied on a destination basis. He notes that there are problems with getting rid of an old, established tax due to windfalls, uncertainties, and incentives for tax avoidance. His conclusion is that we may have to live with the tax and that returning the tax to its pre-1936 structure may be the only feasible solution.

Wayne Thirsk's "Intellectual Foundations of the VAT" identifies Carl Shoup as the intellectual father of the value-added tax (VAT). The purpose of the chapter is to identify Shoup's contributions to growth and application of value-added taxes, now used by more than fifty countries worldwide. Thirsk notes that Shoup does not provide a blanket endorsement of the VAT, on the grounds that it is not a "magic tax potion for solving all fiscal ailments"; the choice of sales tax depends on the structural peculiarities of each country. Thirsk concludes that Shoup's work on the VAT is an "impressive intellectual achievement" which developed the taxonomy used to describe value-added taxes, established the essential equivalences, compared advantages of VAT to other commodity taxes, and linked tax administration capabilities to the appropriate VAT for developing countries.

The last chapter, John Graham's "The Place of the Property Tax in the Fiscal System," is broader in scope than the other chapters in this section because it deals with both sides of the government ledger, revenues and expenditures. Graham develops an analytical framework for establishing an efficient and equitable system of local public finance, one that takes into account property taxes and the nature of municipal services and that can be operationalized by policy makers. He argues that the distinction between people and property services is erroneous since only people can benefit from public services. A more satisfactory distinction is between general and local services. Graham discusses the old and new views of incidence of the property tax; he sees the tax as a tax on the value of the service rendered by property to the owner/tenant over some time period. The paper develops a rational assignment of functions and revenues between upper- and lower-tier jurisdictions, one that is designed to achieve both vertical and horizontal fiscal balance.

### The Expenditure Mix

"Local Public Goods: Shoup Revisited" by Lorraine Eden and Melville McMillan reviews Carl Shoup's writings on local public goods in the light of developments in this area of public finance over the past twenty

years. The authors identify four key issues around which Shoup's work has centered: the characteristics of public services, the definition and measurement of output, the determination of cost functions for level of service, population, and area of the jurisdiction, and the distribution and incidence of the benefits from local public goods. The paper concludes that Shoup's major contributions lie in his work on the characteristics and distribution of local services.

Cliff Walsh's chapter on "Public Goods Provision with Price Exclusion" deals with market provision of price-excludable public goods. He notes that jointness is the key characteristic of such commodities and that jointness has important and not well understood implications for the nature of market equilibrium and public policy. Walsh investigates the implications of excludable public goods for pricing, market structure, decision making, and market behavior. He concludes that market provision may not be superior to government provision for this class of commodities.

The last chapter in this section, John Head's "Merit Wants: Analysis and Taxonomy," shifts the emphasis from social wants (public goods, externalities, joint goods) to merit goods. Head notes that social wants have dominated work in the public finance area because they embody a whole range of cases where market failure can justify government provision in order to give effect to individual preferences. Merit wants, on the other hand, appear to interfere with consumer sovereignty and thus have led a "shadowy existence on the periphery." Head proposes a broader analytical framework that extends the concept of individual sovereignty to include both psychic externalities and self-paternalism. Head's framework uses a hierarchy of preferences that includes behavioral aberrations such as impulse or weakness of will. He concludes that his framework makes the scope of merit wants fully comparable to the scope of social wants and that merit wants could perhaps be used to justify public provision in cases where congestion estimates are used to suggest privatization.

## Macro Public Finance

The first paper in this section, Richard Bird's "Tax Structure and the Growth of Government," argues that tax structure and the size of government are linked. For Bird fiscal changes are made through a political, not an economic, process, one that depends on the interplay of interests and actors. Five propositions link tax structure to expenditure growth:

(1) the tax structure is quasi-constitutional in nature and (2) an important political symbol; (3) tax structure changes are due primarily to exogenous shocks; and (4) tax structure is linked to expenditure structure and (5) to the growth of government spending. Bird concludes that understanding tax reform and understanding government growth are different facets of the same problem.

Peggy Musgrave's chapter, "Fiscal Coordination and Competition in an International Setting," examines the roles played by fiscal coordination and competition when goods, labor, and capital can move across jurisdictions. She focuses on two approaches in the literature. The first approach, associated with Shoup and the European Community, recommends coordination of fiscal systems where individual countries implement their own equitable tax structure that retains individual fiscal characteristics, while using harmonization to neutralize fiscal differentials between countries. The second approach argues that tax competition, like competition between firms in the private marketplace, can promote efficiency and responsiveness of governments. Musgrave compares these two approaches and concludes that the analogy to competition in the private sector does not hold. Even if domestic fiscal structures are efficient, fiscal competition cannot secure an efficient and equitable fiscal structure internationally. Where domestic policies are inefficient, she concludes that fiscal competition is a "clumsy and costly means" of correcting these problems.

Douglas Auld in "Compensatory Fiscal Policy: Evolution or Revolution?" assesses the changes in the economics profession's views about fiscal policy since 1960. Auld first discusses the contributions of Carl Shoup's and Richard Musgrave's treatises to this area. He then identifies seven key theoretical developments which have affected the profession's assessment: rational expectations, supply-side economics, the Laffer curve, tax-push inflation, Ricardian equivalence theory, crowding out, and the natural rate of unemployment. In each case Auld goes through the definitions and discusses how each development is interpreted in a fiscal policy context and its implications for compensatory fiscal policy. Turning to textbooks in public finance and macroeconomics, he looks to what conclusions have been reached on compensatory fiscal policy and what major issues still confront policy makers dealing with short-term stabilization policy. Auld notes that stabilization policy as a topic is no longer included in most public finance textbooks. He concludes that compensatory fiscal policy is unlikely to play a major role in counter-cyclical policy today due to high budget deficit and debt levels.



John Burbidge's chapter, "Social Security and Public Debt," finishes this section. Burbidge notes that the reigning view of social security and debt is based on the Samuelson-Diamond life-cycle growth model. Two critical assumptions underpin this model: (1) relative savings rates differ by age bracket, and (2) taxpayers believe they will receive benefits while debt holders believe the debt will not be repudiated in the future. Burbidge then compares this approach with Shoup's views in his 1969 treatise. Burbidge argues that the older approach forces the reader to think about the uncertain environment in which real world governments must try to function, whereas the current models have only a "nodding acquaintance with reality." He concludes that knowledge is not cumulative, that important ideas have been lost, and that each generation of economists takes important assumptions for granted that previous generations questioned. Burbidge recommends that research be done "in the eclectic middle ground where model selection is more closely tied to empirical facts than to the appeal of its policy conclusions."

#### Conclusion: Tableau Fiscale

The last paper in this volume is by Richard Musgrave. Musgrave notes that Carl Shoup has contributed to the public finance community for sixty years. The purpose of Musgrave's chapter is to look at changes in the field of public finance over the same time period. Musgrave provides a table organized into three rough time periods, 1930–50, 1950–70, and 1970–90, and eight broad topics: general public sector theory, taxation, expenditures, public enterprise, public debt, macro theory, utility and social welfare, and ideology. By going through each of the cells in this matrix, he provides a broad, sweeping view of the growth and dynamics of public finance thought. Lastly, Musgrave stresses the importance of ideology and values. He argues that many of the advances in public finance have been achieved due to new analytical tools; however, the questions that each generation poses and the projects it undertakes are influenced by the time period and its value sets.

#### Main Themes of the Book

From the papers in this book emerge six themes which run, either implicitly or explicitly, through all the papers. The first theme is the importance of the AEA functions—architecture, engineering, and admin-

istration—in successfully applying theoretical models of public finance to practical policy problems. Carl Shoup's chapter defines these functions and applies them to tax missions; however, the concepts are broader than that. All policy makers must take account of the AEA functions in designing successful fiscal reform. Several papers in the book link theory to practice. While Shoup focuses on the links between the three functions, Malcolm Gillis argues that good tax administration is central to public finance. Charles McLure, on the other hand, stresses the engineering aspects. Wayne Thirsk argues that Shoup's solid work on the taxonomy and administrative feasibility of value added taxes is an example of "pragmatism in its pristine form." John Graham, in his chapter on municipal public finance, stresses practicality in his design for an efficient and equitable fiscal structure.

The second theme that runs through this book is the political economy of fiscal reform. This is most clearly argued by Richard Bird in his chapter on the links between taxes and expenditure, where he argues that fiscal reform is a political not an economic process that depends on the interplay of interests and actors. Jack Mintz draws this distinction more sharply. He argues there are two groups of economists, those who argue for practical policy advice on the grounds that analysis is irrelevant because it ignores the behavior and attitudes of governments and those who believe their role is to recommend policies using normative criteria for tax reform, regardless of the political process. Richard Goode, using Shoup's taxonomy, stresses the importance of conflict and consensus criteria in determining the degree of progressivity of the personal income tax. The importance of political economy is illustrated in McLure's chapter which argues that the failure of income tax reform in Venezuela was due to the lack of political will to introduce reforms. It is also seen in William Vickrey's assessment of the longevity of the corporate income tax despite its well known inefficiencies and inequities. Edwin West also uses the political economy approach to explain public provision of services usually considered private like education and nonprofit hospitals.

A third theme is the changing agenda within the public finance profession. Several of the authors compare the Shoup-Musgrave prescriptive school with the more recent optimal tax tradition. The broadest sweep is provided by Richard Musgrave's *tableau fiscale*. He makes the link between ideology and values: the questions each generation of economists poses are influenced by the time in which they write and the values of that time. Burbidge is perhaps most worried by this changing agenda. In his comparisons of new and old models of social security and debt he notes

that knowledge is not cumulative and that some of the practical insights of the older literature have been lost. In terms of specific agenda changes Richard Goode discusses the controversy over the relative merits of income and expenditure taxes and argues that both economic analysis and the economic environment affect theoretical debates. Graham discusses the new and old views of the property tax. Eden and McMillan compare Shoup's work on local public goods to developments in this area over the past twenty years. John Head builds a new, broadened view of individual sovereignty and applies it to the merit wants concept. Peggy Musgrave compares the old view of fiscal harmonization with the new view of tax competition. The paper on compensatory fiscal policy by Douglas Auld identifies seven key developments over the past thirty years.

Another theme is the importance of the international dimension in public finance. Peggy Musgrave's chapter contrasts fiscal harmonization with fiscal competition among states and concludes that harmonization is preferable. Shoup insists that tax architects need a broad view of international fiscal policy changes in order to design effective tax policy. Vickrey stresses that domestic taxes like the corporate income tax have international economic and political effects. McLure notes that changes in the international environment, by constraining tax revenues, can induce meaningful fiscal reform. Tax structure change results primarily from exogenous shocks, according to Bird. Mintz gives examples of difficult policy recommendations in the international sphere.

Several of the authors address unresolved issues within their area of public finance. Goode discusses the debate between income and consumption taxes as the appropriate tax base. Thirsk identifies the subtraction method of calculating value added taxes as an unresolved issue. Eden and McMillan argue that work on defining and measuring both the output and the incidence of public services is needed. Cliff Walsh stresses that jointness in the context of public versus private provision is little understood. Full integration of a broadened concept of the role of merit wants into the theory of public finance remains to be done, according to Head. Richard Bird calls for more understanding of the linkages between tax structure and government growth. Stan Winer notes that the appropriate time horizon for tax purposes is an unsettled issue.

The last theme that threads through *Retrospectives on Public Finance* is the importance of Carl Shoup's work. Each of the chapters in this book identifies and assesses his contribution to the theory and practice of public finance. Malcolm Gillis argues that the Shoup missions defined the agenda for tax reform in developing countries. Nakazato emphasizes

the impacts of the Shoup report on economic development in Japan. Thirsk identifies Shoup as the “intellectual father of the VAT” (although Shoup would argue that he is not “at bat for the VAT”). Eden and McMillan conclude that he made major contributions to the theory of local public goods. Peggy Musgrave credits Shoup with much of the underlying work on international fiscal harmonization. From these assessments it is not hard to draw the conclusion, which Malcolm Gillis states in his chapter, that Carl Shoup is one of the great public finance figures of this century.

### Using This Book in the Classroom

As a comprehensive survey of the prescriptive school of public finance, the contents of *Retrospectives on Public Finance* should be useful to graduate students and practitioners of public finance. Possible courses where this book could be used include senior undergraduate and graduate courses in public expenditure, public sector economics, taxation theory and policy, public finance in developing countries, international taxation, public administration and policy analysis, public choice theory, and intergovernmental relations.

The chapters and comments are readable by senior undergraduates and graduate students in public finance courses, so that the book can be used to supplement standard public finance textbooks, in addition to Musgrave's and Shoup's own treatises. A half course in public expenditure should focus on Parts IV, V, and VI; one on taxation, on Parts II, III, V, and VI. A full course on public finance would use all of the readings. Courses emphasizing public finance in developing countries might concentrate on Parts II, III, and V; while courses on public choice and welfare economics would benefit from Parts IV, V, and VI.

The table below is included for those professors who wish to use the book as a supplementary book of readings to accompany one of the standard textbooks in public finance. The table cross-references each chapter in *Retrospectives on Public Finance* to the following textbooks:

- (A) Atkinson, A. B., and J. E. Stiglitz. 1980. *Lectures on Public Economics*. London: McGraw-Hill.
- (B) Boadway, Robin, and David Wildasin. 1984. *Public Sector Economics*. 2nd ed. Boston and Toronto: Little, Brown.
- (C) Brown, C. V., and P. M. Jackson. 1986. *Public Sector Economics*. 3rd ed. Oxford: Basil Blackwell.

- (D) Due, John F., and Ann F. Friedlaender. 1981. *Government Finance: Economics of the Public Sector*. 7th ed. Homewood, Ill.: Irwin.
- (E) Musgrave, Richard. 1959. *The Theory of Public Finance: A Study in Political Economy*. New York, Toronto, and London: McGraw-Hill.
- (F) Musgrave, Richard and Peggy Musgrave. 1984. *Public Finance in Theory and Practice*. 4th ed. New York: McGraw-Hill Ryerson.
- (G) Prest, A. R., and N. A. Barr. 1985. *Public Finance in Theory and Practice*. London: Weidenfeld and Nicholson.
- (H) Rosen, Harvey. 1988. *Public Finance*. 2nd ed. Homewood, Ill.: Irwin.
- (I) Shoup, Carl. 1969. *Public Finance*. Chicago: Aldine.
- (J) Stiglitz, Joseph. 1986. *Economics of the Public Sector*. New York and London: W. W. Norton.
- (K) Tresch, Richard. 1981. *Public Finance: A Normative Theory*. Georgetown, Ont.: Irwin-Dorsey.

The chapters in *Retrospectives on Public Finance* that correspond to the chapters in the textbooks listed above are outlined in the matrix below. This matrix lists chapters vertically and textbooks horizontally. Each cell in the matrix gives the chapter in the textbook which corresponds to the chapter in this volume.

R P F	Public Finance Textbooks										
	A	B	C	D	E	F	G	H	I	J	K
2	18	3	2	—	1,3	1,37	7	2	17	16,25	1,14
3	18	—	—	19	—	37	7	15	17	16,25	—
4	18	—	—	—	—	37	7	15	17	16,25	—
5	18	—	—	—	—	37	7	15	17	16,25	—
6	2,3	13	14	10,11	11,12	16,17	13	16,17	11	20,25	13
7	5	13	18	12	14	18,19	16,17	19	12	21,22	17
8	1	11	17	15	13	20	19	20	8,9	17	—
9	3	12	16	16	14	21	15	21	15	22	13
10	17	15	9	—	1	23	3	22	5	26,27	29
11	16	4	3	2,3	1	3,4	3	5	4,5	4,5	5
12	—	6	4	—	1	4	—	4	4	3,4,6	31
13	1,10	—	5	—	—	6,7	8	6	20	2,6	—
14	17	15	—	18	8	36	18	23	25	26	—
15	—	—	—	—	18,21	29,30	6	18	22,24	—	—
16	8	14	15	6	23,24	33,34	14	10,11	6	13	13
17	11,18	3	2	—	1	1	2	2	1,2	4	1,14