

TAXING SHARED ECONOMIES OF SCALE

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ABSTRACT

Economies of scale exist if long-run average costs decline as output rises. All else being equal, the decline in average costs should lead to greater profitability, making economies of scale attractive to businesses. Nobel laureate George Stigler recognized that economies of scale should help determine the optimum size of a firm. To obtain economies of scale and optimum firm size, parties may integrate resources or grant access to resources without integrating. Such arrangements create shared economies of scale. Tax law must consider the effects of shared economies of scale and address them. In particular, the varying degrees of scale-sharing raise tax classification issues. Traditional classification analyses focus on the legal definition of tax partnership, which requires a joint-profit motive. The IRS and courts have concluded that sharing economies of scale satisfies the joint-profit-motive test and that arrangements with a joint-profit motive are tax partnerships. Relying on technical analysis and economic theory, this Article argues, however, that if parties integrate resources without integrating all relevant parts of the production process, they often should not come within the definition of tax partnership. By focusing upon shared economies of scale, the IRS and courts have created a slippery slope. Sharing economies of scale is common even in nonintegrated arrangements, which allow parties to benefit from each other's specialized skills by granting access to resources. If tax law relies upon shared economies of scale to classify business arrangements, its classification system will include arrangements that are not suited for tax partnership classification.

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I. INTRODUCTION

Business is the profit-motivated employment of resources to produce output. That definition has three important elements: (1) resources, which include property and services (i.e., labor and capital); (2) output, the product of employed resources; and (3) profit, the excess of revenue earned from the transfer of output over the cost to produce and deliver the output. Business participants generally seek to maximize profit by reducing costs and increasing revenue. The cost-reducing potential of economies of scale (i.e., the decline in average cost per unit as output rises¹) motivates businesses to find ways to create them. To obtain maximum economies of scale businesses must operate at the optimum size, so the search for economies of scale will often affect the size of a business.² The potential for sharing economies of scale will often influence the decision to integrate resources. This focus on cost-reduction as a form of profit maximization is unusual in tax literature, as the focus on profit often turns to revenue-

1. Aubrey Silberston, *Economies of Scale in Theory and Practice*, 82 *ECON. J.* 369, 369 (1972) (“Classic economies of scale relate to the effect on average costs of production of different rates of output, per unit of time, of a given commodity, when all possible adaptations have been carried out to make production at each scale as efficient as possible.”)

2. See, e.g., George J. Stigler, *Economies of Scale*, 1 *J. L. & ECON.* 54 (1958) (analyzing the optimum firm size using the survivor technique, which observes the output of different sized firms over time and measuring efficiency based upon changes in market share).

increasing measures.

Examples illustrate how economies of scale affect the search for the optimum firm size. A firm with insufficient sales may have costs per unit of output that prevent profitable operations. Only by producing a sufficient quantity of output can a firm become profitable. For example, assume a production facility costs \$100,000 to construct and \$10,000 to operate over a period of time—its total cost of production is \$110,000. If the facility produces and sells 110 units, the cost per unit will be \$1000.³ The cost per unit would decrease to \$100, however, if the plant could produce and sell 1100 units. That decrease in cost per unit as the amount of output increases, could affect firm's profitability.

Assume the market will pay \$200 per unit for 110 to 1100 units, and the demand will never exceed 1100 units.⁴ At that price, a firm that produces only 110 units will lose money, a firm that produces 550 units would break even, and a firm that produces 1100 units would have profit.⁵ A profit-seeking enterprise would exist in such market only if it could produce more than 550 units. If two parties have an equal share of the market, they could each construct and operate a production facility that produces 550 units, and each firm would break even. Alternatively, they could jointly construct and operate a single facility and share the output equally. If they jointly construct and operate the facility, they could each operate at a profit because the economies of scale of the single facility drive down the average cost per unit. Thus, by sharing economies of scale, each party is able to increase its respective profit. The parties may use various legal structures to share economies of scale. Tax law must consider how to tax the benefit obtained from shared economies of scale.

A firm may become too large, however, and create diseconomies of scale, i.e., the average cost per unit could increase as the size of the firm increases.⁶ For example, a firm may integrate too much of the production process and lose specialized skills that would otherwise create economies of scale.⁷ To illustrate, if Cell Co produced cell phones and Big Box Electronics sold cell phones and other electronics, they could each develop expertise in those respective tasks. Tom's production expertise would enable him to produce greater output more efficiently. Jerry's marketing

3. The cost per unit is the total cost of \$110,000 divided by the 110 units of output (i.e., \$110,000/110).

4. The price per unit will should generally decrease as more units enter the market and increase the supply of the product. To keep the analysis simple, however, this Article assumes the price is inelastic between 110 and 1,100 units.

5. The revenue from 110 units would be \$22,000 (110 units x \$200), which falls far short from covering the \$110,000 cost. The revenue from 550 units would be \$110,000 (550 units x \$200), which equals the \$110,000 cost. The revenue from 1100 units would be \$220,000, which easily covers the \$110,000 of costs and provides a nice profit.

6. See RALPH T. BYRNS & GERALD W. STONE, *ECONOMICS* 497 (5th ed. 1993).

7. See *Id.* at 497 (recognizing that larger firms may encounter diseconomies of scale because managerial control decays as layers are added to hierarchy and monitoring performance becomes increasingly difficult).

expertise would help him sell more effectively. The parties could coordinate their expertise to produce and sell more cell phones and reduce the overall cost per unit. Economic factors may prompt them to integrate their respective resources,⁸ but integration may diminish each party's specialized skills and create agency costs that drag down productivity.⁹ In such situations, integration may cause the cost per unit of output to rise. Thus, the parties may more effectively share greater economies of scale if they do not integrate their resources but instead grant each other access to the resources.

Parties integrate resources by reciprocally assigning interests in the residual risk of the resources.¹⁰ The residual risk of a resource is the right to control all aspects of a resource not contracted away.¹¹ Parties can hold residual risk in property, services, and combinations of property and services (i.e., businesses). Parties also may assign rights in resources without transferring a portion of the resource's residual risk. For example, the holder of residual risk in property may lease the property without transferring a share of the property's residual risk. The residual-risk holder grants the lessee the right to use the property for a period of time, but retains all of the rights in the property. Similarly, a service provider may contract to provide services for a certain period of time. Because the service provider retains the economic right to all services not contracted away, the service provider holds the residual risk of the services. To integrate resources, parties must transfer a share of the residual risk in the resources to another party in exchange for a share of the other party's residual risk in a resource. Distinguishing residual-risk sharing from the assignment of rights to resources is often difficult. The extent to which parties share rights in resources refers to the breadth of integration.

Parties can integrate the production process (i.e., the conversion of raw materials into delivered final products) to different depths. For example, parties may integrate raw material extraction and production, but not integrate the distribution of the product. Parties may separately perform each of the extraction, production, and distribution processes, without integrating any of them.

Regardless of the depth of integration, parties can share economies of

8. See Bradley T. Borden, *Aggregate-Plus Theory of Partnership Taxation*, 43 GA. L. REV. 717, 744–52 (2009) (illustrating why parties may integrate property and services).

9. See Raghuram G. Rajan & Luigi Zingales, *Power in a Theory of the Firm*, 113 Q. J. ECON. 387, 405, 407 (1998) (“In other words, ownership provides security which may breed complacency.” “Thus, ownership may reduce the incentive to specialize.”).

10. See *infra* Part IV.B. (discussing resource integration and distinguishing resource integration from transfers of rights in resources).

11. See Stanford J. Grossman & Oliver D. Hart, *The Costs and Benefits of Ownership: A Theory of Vertical Integration*, 94 J. POL. ECON. 691, 695 (1986). That definition differs slightly from the definition of residual risk in an integrated arrangement. See Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 J. FIN. ECON. 305, 311 (1976) (defining residual risk in an integrated arrangement as “the difference between the stochastic inflows of resources and promised payments to agents.”).

scale. Tax law must determine how it will tax various scale-sharing arrangements. To properly tax arrangements that share economies of scale, tax law must first classify them. As a general matter, tax law has rules for classifying arrangements that clearly integrate resources for the entire production process.¹² Such arrangements are either tax partnerships subject to partnership taxation or tax corporations subject to corporate taxation. Tax law struggles, however, to classify arrangements with shallow or questionable integration. The IRS and Seventh Circuit claim that arrangements with shallow integration are tax partnerships because the parties have a joint profit through the shared economies of scale.¹³ This Article argues that position lacks technical and theoretical support.

The Article argues that classification rules must operate according to general principles of the income tax system. The federal income tax system uses somewhat crude methods to measure and tax income. The methods are crude because the measurement of income is limited to observable, quantifiable phenomena.¹⁴ Tax law uses taxable income (i.e., gross income minus deductions), as the metric for assessing tax.¹⁵ Taxable income is comparable to the general concept of profit (i.e., revenue minus expenses), but profit is not a technical term and may give way to different meanings in different contexts.¹⁶ Profit can be used expansively to include items that are not susceptible to measurement, such as leisure or other satisfactions, which the definition of tax law has rejected.¹⁷ The limited abilities of tax law do not permit the taxation of such unmeasurable benefits that may come within a broad definition of profit. Thus, tax law limits its application to phenomena it can measure in dollar denominated terms. Furthermore, the definition of taxable income includes provisions that reflect policy objectives that may vary from traditional measures of

12. See Treas. Reg. § 301.7701-1 (as amended in 2008), -2 (as amended in 2008), -3 (as amended in 2006) (defining separate entity and applying the so-called “check-the-box” regulations to classify business arrangements).

13. See *infra* Part III.B.

14. See HENRY C. SIMONS, PERSONAL INCOME TAXATION: A DEFINITION OF INCOME AS A PROBLEM OF FISCAL POLICY, 43 (1938) (“But one devises tools of analysis which are useful, if crude; and a tax base may be defined in such a manner as to minimize obvious inequities and ambiguities.”).

15. See I.R.C. § 1(a)-(d) (2006) (imposing a tax on taxable income); I.R.C. § 63(a) (2006) (defining taxable income as “gross income minus deductions”).

16. See *infra* text accompanying notes 111–120.

17. See *infra* text accompanying notes 119–120 (describing the dictionary definition of profit); Simons, *supra* note 14 at 51–52 (observing that leisure is a major item of consumption and therefore could be included in a broad definition of income); Alan Gunn, *The Case for an Income Tax*, 46 U. CHI. L. REV. 370, 383 (“The ‘sacrifice’ theory is a product of the erroneous idea that income measures one’s annual ‘satisfactions.’ We might say, pursuing this line, that a ‘true’ measure of income would include all forms of imputed income from owning property or performing services, and all nonpecuniary ‘windfalls’ like pleasant sunsets. Those who take this position concede its impracticality, and so are willing to fall back on the more conventional notions of income as rough measure of the real thing.”).

profit.¹⁸ That distinction is important because traditional analyses of integrated arrangements rely upon the definition of profit, which produces varying results, depending upon the definition of profit used.

Economic theory of classification relies heavily upon the assignment-of-income doctrine. The assignment-of-income doctrine provides that any person who earns taxable income, should report that taxable income and pay tax on it.¹⁹ Determining the earner of taxable income is somewhat straight forward in nonintegrated arrangements. The person who holds the residual risk of a resource should recognize and pay tax on the income from that resource. When parties integrate certain types of resources, however, they cannot determine with specificity the source of income this general principle of tax law becomes insufficient.²⁰ Partnership tax and corporate tax address the difficulties that resource integration raises.²¹

Economic theory of business taxation suggests that, as a general rule, when two or more parties integrate their resources, they should generally be subject to partnership tax or corporate tax.²² This Article further develops that theory by presenting an exception to that general rule. The article suggests that some integrated arrangements should be excepted from the general rule and suggests parameters for establishing the exceptions. One exception is arrangements that integrate only the production function to create economies of scale and reduce the cost of production i.e., production-oriented economies of scale. Sharing economies of scale allow the parties to provide products or services that may otherwise be cost-prohibitive. The Article demonstrates, however, that if they only integrate the production function, a separate tax regime often is not necessary to determine each party's taxable income.

Nonintegrated arrangements illustrate that integrating resources is costly, but sharing output may be essential to reduce agency costs. For example, employment, financing, and leasing arrangements often use profit sharing to help reduce agency costs, but such arrangements generally should not be tax partnerships. The challenge tax law faces with such arrangements is distinguishing between those that integrate resources and

18. See, e.g., I.R.C. § 121(a) (2006) (excluding gain from the sale of a principal residence from gross income); I.R.C. § 1031(a) (2006) (providing that gain or loss shall not be recognized on the exchange of like-kind business-use or investment property).

19. See *Lucas v. Earl*, 281 U.S. 111, 114–15 (1930) (holding that a husband could not shift the tax liability of his compensation to his wife); *Helvering v. Horst*, 311 U.S. 112, 114, 124–25 (1940) (holding that the person who owns property must recognize income from that property).

20. See *infra* Part II.B. (describing the inability to trace income from resources contributed to integrated arrangements, if the arrangement includes contributed services).

21. Partnership tax addresses the problem with flow-through taxation that includes allocation rules. See I.R.C. § 701 (2006) (imposing on partners the liability for tax on partnership income); I.R.C. § 704(b) (2006) (providing rules of allocating partnership tax items). Corporate tax imposes a tax on corporations. See I.R.C. § 11(a) (2006).

22. See Bradley T. Borden, *Residual-Risk Model for Classifying Business Arrangements*, 37 *FLA. ST. U. L. REV.* ____ (forthcoming 2010) (discussing theoretical justifications for corporate and partnership taxation).

those that merely share rights in resources or share economies of scale from specialization. Tax law will be better equipped to address such distinctions if it abandons the ill-founded use of shared economies of scale to classify business arrangements. A continued reliance on shared economies of scale could begin an increasingly uncontrolled descent down a slippery slope.

This Article focuses on the tax treatment of arrangements that integrate only a portion of the production process and those that do not integrate resources but do grant access to resources. In particular, it focuses on two types of arrangements that integrate to varying depths and breadths to capitalize on two types of shared economies of scale: (1) production-oriented economies of scale and (2) output-oriented economies of scale. Members of arrangements with production-oriented economies of scale combine resources to produce output and distribute the product to the members in kind, or, they produce no output at all. On the other hand, arrangements with output-oriented economies of scale share the output of an arrangement but do not integrate resources to produce the output. The Article demonstrates that traditional analyses fall short of providing working solutions to complex problems. Economic analyses of integrated arrangements help solve difficult problems such arrangements create.

Scale-sharing arrangements are generally either disregarded arrangements or tax partnerships. The distinction should turn on whether the arrangement requires the partnership tax rules. Part II of the Article reviews the fundamentals of partnership tax theory to set the stage for analyzing shared economies of scale. Part III the draws upon that foundation to analyze production-oriented economies of scale. Part IV considers the proper taxation of output-oriented economies of scale.

II. FUNDAMENTALS OF PARTNERSHIP TAX THEORY

Shared economies of scale raise the tax classification question. The question is whether tax law should disregard an arrangement that shares economies of scale or treat it as a tax partnership or tax corporation. The different classification can be very significant. For example, if tax law classifies a scale-sharing arrangement as a tax corporation, its members will be subject to double taxation and debt and equity will be taxed differently.²³ The difference between disregarding an arrangement and treating it as a tax partnership can affect the timing of income recognition,²⁴

23. See I.R.C. § 11(a) (2006) (imposing a tax on corporate income); I.R.C. § 61(a)(4), (7) (2006) (including dividends and interest in gross income); I.R.C. §163(a) (allowing a deduction for interest).

24. See, e.g., I.R.C. § 706(a) (2006) (requiring a partner to recognize partnership taxable income in the year in which the partnership taxable year ends); *Estate of Levine v. Comm'r*, 72 T.C. 780, 788 (1979) (holding that because a partnership existed, the taxpayer had to recognize partnership taxable income in the year in which the partnership taxable year ended); *Bentex Oil Corp. v. Comm'r*, 20 T.C. 565, 571–72 (1953) (providing that the existence of a partnership and a partnership election affect the timing of a deduction).

the amount and character of gain or loss recognized on the disposition of an interest in the arrangement,²⁵ the procedural positions members of the arrangement and the IRS take in a tax dispute,²⁶ the availability of the partnership tax allocation rules,²⁷ and other matters that affect federal and state tax revenues and the tax liabilities of the members.²⁸ The different classification can therefore be the difference in billions of dollars of tax liability, affect the placement of the tax burden, and may affect a person's due process rights. Often, however, parties do not know exactly the tax issue that classification will implicate so when issues arise, taxpayers and the IRS expend significant resources disputing classification.²⁹

An arrangement is a tax corporation if it is incorporated under state law or elects that classification.³⁰ All other arrangements are either tax partnerships or disregarded arrangements.³¹ The definition of tax corporation is clear, so shared economies of scale raise the question of whether unincorporated arrangements are tax partnerships or should be disregarded. The distinction is important because tax partnerships are

25. See, e.g., I.R.C. § 741 (2006) (treating the sale of a partnership interest generally as a sale of a capital asset, and not as a sale of interests in the underlying property); I.R.C. § 1031(a)(2)(D) (2006) (disqualifying partnership interests from section 1031 nonrecognition treatment); *Underwriters Ins. Agency v. Comm'r*, 40 T.C.M. (CCH) 5, 9 (1980) (holding that an arrangement involving a fishing boat was a partnership and loss on the sale of an interest in the arrangement was capital, not the ordinary loss it would have been if the interest sold had been in the assets).

26. See, e.g., *Press v. Comm'r*, 52 T.C.M. (CCH) 285, 286–87 (1986) (holding that an arrangement was a tax partnership and the extension of the partnership statute of limitations applied to partnership items allocated to the partner); WILLIAM S. MCKEE, WILLIAM F. NELSON & ROBERT L. WHITMIRE, *FEDERAL TAXATION OF PARTNERSHIPS AND PARTNERS* ¶ 9.07[1] (3d ed. E-book 2006) (1977) (“The statute of limitations runs separately for partnership items. With respect to each partner, therefore, the statute may be open with respect to partnership items even though the nonpartnership aspects of his return may be closed under the rules generally applicable to individual and corporate taxpayers.”).

27. See I.R.C. § 704(a) (2006) (providing that partnership agreement generally determines partnership allocations); Bradley T. Borden, *Partnership Tax Allocations and the Internalization of Tax-Item Transactions*, 59 S.C. L. REV. 297, 338–45 (2008) (describing tax-item transactions that are available to members of partnerships but not others).

28. See, e.g., *infra* text accompanying notes 141–165 (discussing the difficult accounting and reporting issues that arise from the holding that a co-owned joint-production arrangement is a tax partnership).

29. To illustrate, the question of whether an arrangement is a tax partnership or should be disregarded has been the subject of more than 100 decided cases and published rulings. See Bradley T. Borden *A Catalogue of Legal Authority Addressing the Federal Definition of Tax Partnership*, 804 TAX PLANNING FOR DOMESTIC & FOREIGN PARTNERSHIPS, LLCs, JOINT VENTURES & OTHER STRATEGIC ALLIANCES 763, 777–824 (Louis S. Freeman & Clifford M. Warren eds., 2008).

30. See Treas. Reg. § 301.7701-2(b)(1) (as amended in 2008) (providing that a tax corporation includes arrangements incorporated under state law); Treas. Reg. § 301.7701-3(a) (as amended in 2006) (providing that an unincorporated arrangement with two members (i.e., a tax partnership) can elect to be a tax corporation).

31. See Treas. Reg. § 301.7701-1(a)(2) (as amended in 2006) (describing arrangements that either are separate entities (i.e., tax partnerships or tax corporations) or are note (i.e., disregarded arrangements); Treas. Reg. § 301.7701-2(a) (as amended in 2008) (providing that separate entities are either tax partnerships or tax corporations); Treas. Reg. § 301.7701-3(a)(2) (as amended in 2006) (providing that noncorporate separate entities are tax partnerships by default).

subject to partnership taxation and the members of disregarded arrangements are taxed individually without regard of the arrangement. The definition of tax partnership separates disregarded arrangements from tax partnerships,³² and it determines which unincorporated arrangements are subject to partnership taxation.³³ Thus, the definition of tax partnership must be accurate to ensure the proper application of partnership taxation.

An employment arrangement is an example of a disregarded arrangement. Tax law requires the employer to recognize income from the business and the employee to recognize income from services.³⁴ Tax law treats the employment arrangement as the aggregate of the employer and employee, not a separate entity. Tax law also disregards some co-ownership arrangements. For example, if two people own raw land as tenants in common, tax law treats them each as owning an interest in the property and taxes each individual on income from their respective interests; tax law does not treat the arrangement as a separate entity.³⁵ Thus, the law disregards the co-ownership arrangement.

Tax theory suggests that only arrangements that require the partnership tax rules should be subject to partnership taxation.³⁶ The definition of tax partnership should contemplate the purposes and theory of partnership tax rules.³⁷ The aggregate-plus tax regime of partnership taxation embodies those rules. Stated simply, aggregate-plus taxation generally attempts to disregard arrangements and requires the members of the arrangement to report the arrangement's tax items.³⁸ Aggregate-plus taxation recognizes arrangements as separate entities only when needed to effectively administer tax law.³⁹ That need arises when the parties to an arrangement cannot trace income from a resource to a single owner of the

32. See Bradley T. Borden, *Policy and Theoretical Dimensions of Qualified Tax Partnerships*, 56 U. KAN. L. REV. 317, 320–21 (2008).

33. See I.R.C. Subchapter K (2006) (subjecting partnerships to the partnership tax regime).

34. See I.R.C. § 61(a)(1) (2006) (requiring an employee to include compensation in gross income); § 61(a)(2) (requiring a business owner to include income derived from business in gross income).

35. See Rev. Proc. 2002-22, §1, 2002-1 C.B. 733 (providing guidelines that the IRS will consider in ruling privately whether a co-ownership arrangement is a tax partnerships or disregarded arrangement). Although Rev. Proc. 2002-22 merely provides ruling guidance, tax practitioners treat it as a safe harbor for classifying complex co-ownership arrangements. See Bradley T. Borden, *Open Tenancies-in-Common*, 39 SETON HALL L. REV. 387, 392, 402 (2009).

36. See Borden, *supra* note 22.

37. See *Wheeler v. Comm'r*, 37 T.C.M. (CCH) 883, 889 (1978) (“When an entity must be classified for purposes of a Federal income tax statute, policy considerations of Federal income tax should govern that classification . . .”).

38. See I.R.C. § 701 (2006); Borden, *supra* note 8 at 762–65.

39. See Bradley T. Borden, *The Federal Definition of Tax Partnership*, 43 Hous. L. Rev. 925, 941–48 (2006) (recounting the evolution of partnership taxation from an aggregate regime under which Congress almost completely disregarded partnerships to an aggregate-plus regime with entity components imposed as needed to effectively administer the income tax); *infra* Section II.B. (discussing the taxation of integrated arrangements).

resource.⁴⁰ Tracing often becomes impossible when parties integrate resources. Thus, the line between tax partnerships and disregarded arrangements arguably should be resource integration.

A. Taxation of Nonintegrated Arrangements

An individual should bear the tax burden of income that flows from resources the individual owns.⁴¹ This is a reiteration of a fundamental principle of taxation—the assignment-of-income doctrine.⁴² That doctrine provides more specifically that a person who owns property must recognize (i.e., include on a tax return) income from that property, and a person who provides services must recognize income from those services.⁴³ The distinction is important because tax law often treats income from property differently from income from services.⁴⁴ For example, income from services is subject to ordinary income rates, which can be as high as 35%.⁴⁵ Income from property, on the other hand, may be as low as 15%.⁴⁶ Consequently, identifying the owner of property and services that generate income is important to ensure that the owner recognizes the income from such resources. If tax law can identify a single owner of services, the owner of those services should recognize the income from the services. Similarly, if tax law can identify a single owner of property, the property owner should recognize all income from the property. Finally, a person should only recognize income from owned resources. The structure of the current tax system provides for such treatment, but it must be able to identify the single owner of a resource.

To impose tax on the owner of a resource, however, tax law must be able to determine the source of income and trace it to the owner of the resource. An example illustrates why general principles of income tax apply to nonintegrated arrangements. Assume that Power Co, a utility company, produces electricity and sells it to end users. It employs all of its resources (property and services) for that purpose. It does not, however, own the power lines needed to transmit the electricity.⁴⁷ Transmission Co owns power lines. Power Co and Transmission Co enter into an agreement providing that Power Co can use the power lines to transmit electricity, but it must pay Transmission Co a percentage of its revenue from the

40. See Borden, *supra* note 8 at 752–61.

41. The Article uses the term “own” to refer to bearing the residual risk of a resource.

42. See *supra* note 19 and accompanying text.

43. See *supra* note 19.

44. See, e.g., I.R.C. § 1(h)(1)(C) (2006) (providing a favorable tax rate for certain capital gains recognized on the sale of capital assets).

45. See I.R.C. § 1(i)(2) (2000) (setting the maximum individual tax rate at 35%).

46. See I.R.C. § 1(h)(1)(C) (2006).

47. For a discussion of the division of functions in the power production and delivery industry, see generally David B. Spence, *Can Law Manage Competitive Energy Markets?* 93 CORNELL L. REV. 765 (2008).

electricity transmitted over its lines. General principles of income tax can determine each party's tax responsibilities so tax law should disregard the arrangement. Power Co receives payments from end users and should report those payments, net of its expenses, as business income.⁴⁸ The income can be nothing else to Power Co because Power Co is in the business of providing electricity to end users and employs all of its resources for that purpose. Therefore, income Power Co receives must be from its business. Transmission Co, on the other hand, owns only electricity-transmission assets. Income it receives therefore can be nothing other than income from property it owns, so the income would be rental income.⁴⁹

Economic theory suggests that residual risk determines the owner of property.⁵⁰ Recall that residual risk exists if a person has rights in property not contracted away.⁵¹ For example, Transmission Co holds legal title and fee simple to the transmission assets. By agreement, it allows Power Co to transport a quantum of electricity over the lines. Thus, Transmission Co must make the lines available for Power Co to transmit the quantum of electricity provided for in their agreement. Transmission Co has contracted away some of its right in the power lines. If the capacity of the lines is greater than what Power Co uses to transmit electricity, Transmission Co could allow other parties to use the excess capacity.⁵² Transmission Co's control of the excess capacity, gives it the control of aspects of the property not contracted away, so Transmission Co bears the residual risk of the property. Residual risk born by a single person is unitary residual risk.⁵³ As the holder of the unitary residual risk of the transmission assets, Transmission Co must recognize the income from those assets. Assuming Transmission Co owns no other property and provides no services,⁵⁴ its

48. See I.R.C. § 61(a)(2) (2006) (including gross income from business within the general definition of gross income); I.R.C. §162(a)(2006)(allowing ordinary and necessary business deductions).

49. See Treas. Reg. § 1.61-8(a) (as amended in 2004) (providing that gross income includes rentals received for the occupancy of real estate or the use of personal property); *Id.* at (c) (providing that expenses paid by the lessee are rental income to the lessor).

50. See Grossman & Hart, *supra* note 11 at 693–95 (concluding that the person who controls all rights not contracted away owns the property).

51. See *supra* note 11 and accompanying text.

52. This assumes that Transmission Co has not granted Power Co exclusive use of the lines and that granting use of the excess capacity does not interfere with Power Co's use. Power Co may wish to obtain exclusive use to be able to avoid price wars with a competitor. Even if Transmission Co were to grant Power Co exclusive use of the transmission assets, the agreement would not take away Transmission Co's unitary risk in the transmission assets, if the agreement is not perpetual. If the agreement was exclusive and would terminate, then Transmission Co would control the transmission assets after the termination of the agreement and would bear the unitary residual risk. If the agreement provided Power Co the perpetual exclusive use of the assets, perhaps it would transfer the unitary residual risk to Power Co.

53. See Borden, *supra* note 22 (coining the phrase "unitary residual risk").

54. Transmission Co could provide no services with respect to the transmission assets if the agreement with Power Co required Power Co to maintain the assets.

income can be nothing other than income from the transmission assets. This result should not change if Transmission Co and Power Co agree that the amount Power Co will pay for use of the lines depends upon Power Co's profit.⁵⁵

Power Co, on the hand, bears the unitary residual risk of the property and services it uses in its business. The property includes those assets, other than the transmission assets, needed to produce electricity and deliver it to end users. Its services include those needed to produce the electricity, and deliver it to end users.⁵⁶ The use of the transmission assets does not alter the nature of Power Co's income because Power Co does not hold the residual risk in the transmission assets. Therefore, Power Co does not have income from the transmission assets. General income tax principles can govern an arrangement between two parties, each of whom holds the unitary residual risk in the respective income-producing resources of the arrangement. Such arrangements do not require the use of a separate a tax regime.

B. Taxation of Integrated Arrangements

General principles of income tax become inadequate when parties integrate resources. Parties who integrate resources often cannot trace income from its source to the owner of the source. For that reason, integrated arrangements generally require a separate tax regime.⁵⁷ If an integrated arrangement is not a tax corporation, partnership tax would generally apply to it. Consider the tax complexities that arise if Power Co and Transmission Co integrate their resources and the need those complexities raise for a separate tax regime. To integrate resources, Power Co must transfer a portion of the residual risk of its power generation and distribution business (i.e., its property and services) to Transmission Co. Transmission Co must transfer a portion of the residual risk in the transmission assets to Power Co. Those reciprocal transfers create an integrated arrangement. After integrating the resources, the parties share the residual risk in the transmission assets and the power generation and distribution business; they no longer receive income from resources in which they bear unitary residual risk.⁵⁸ After integration, both parties will

55. See *Place v. Comm'r*, 17 T.C. 199, 2006 (1951), aff'd 199 F.2d 373 (6th Cir. 1952) (holding that sharing profits was not enough to find that arrangement was a tax partnership and not a lease); *Harlan E. Moore Charitable Trust v. United States*, 9 F.3d 623, 626 (7th Cir. 1993) (holding that an arrangement that shared some expenses and output was a lease, not a tax partnership).

56. If the agreement with Transmission Co requires that Power Co maintain the transmission assets, Power Co's services would include the maintenance of those assets.

57. An exception to this rule would be a co-owned property arrangement, if none of the co-owners provided services with respect to the property. See *infra* text accompanying notes 80–90 (discussing why simple co-ownership arrangements do not require a separate tax regime).

58. The parties will share either allocation-dependent residual risk or distribution-dependent residual risk following integration. See *Borden*, *supra* note 22. Although tax law does not distinguish

hold an interest in the transmission assets and the generation and distribution business, and the parties' income will be from a combination of those resources. Thus, tax law cannot merely look to the contributed resources or the source of income to determine the character and amount of income that flows to each party.

Contrasting the economics of integrated and nonintegrated arrangements helps illustrate the tax complexities. If prior to integration, Power Co had assigned a portion of the income from the generation and distribution business to Transmission Co,⁵⁹ Transmission Co would not have income from the generation and distribution business. The assignment-of-income doctrine would treat Power Co as receiving the income from its customers and transferring it to Transmission Co. The income assigned to Transmission Co would have been income from the transmission assets because that is all Transmission Co owned. Similarly, if Transmission Co had assigned a portion of the income from the transmission assets to Power Co, the assignment-of-income doctrine would have required Transmission Co to recognize that income and then would have treated Transmission Co as paying it to Power Co.⁶⁰ Power Co would include the assigned income as income from resources it owned, as it could not receive income from Transmission Co's assets. After the parties integrate resources, however, the assignment-of-income doctrine becomes inapplicable. A part of the income from the generation and transmission business will belong to Transmission Co and a part of the income from the transmission assets will belong to Power Co.

To illustrate, Power Co's income prior to integration was \$500,000 (without considering the payment made to Transmission Co), and it paid Transmission Co \$50,000 to use the transmission assets. Transmission Co allowed other power companies to use the same assets and received \$20,000 from the other companies. Thus, Transmission Co had \$70,000 of income from the transmission assets, and Power Co had \$450,000 of income from its business.⁶¹ Assume the parties integrate their resources and, as a result, the income from the generation and distribution business increases by \$20,000 to \$520,000, and the income from other companies using the transmission assets increases by \$15,000 to \$35,000.⁶² Thus,

between the two types of shared residual risk, this Article assumes all integrated arrangements have allocation-dependent residual risk.

59. Power Co could assign the income by directing one of its customers to pay the utility bill directly to Transmission Co.

60. The income Transmission Co may have assigned to Power Co would be income from other power companies who used the lines. Transmission Co may have assigned the income to Power Co in payment of a breach of contract or compensate Power Co for losses sustained due to Transmission Co fault or defective assets.

61. Power Co's income is \$500,000 of income without considering the payment to Transmission Co minus the \$50,000 paid to Transmission Co.

62. The increase in income from both sources justifies the integration. Generally parties would not integrate unless they believed that an integrated arrangement would generate greater utility for both parties. See Armen A. Alchian & Harold Demsetz, *Production, Information Costs, and Economic*

integrating their resources, the parties are able to increase the resource's total income by \$35,000.⁶³

Assume business income and payments from other parties increase because the parties are able to increase the capacity of the lines. Perhaps Transmission Co was unwilling to increase the capacity before integration because doing so would have given Power Co a windfall increase in capacity without increasing Transmission Co's profitability. Power Co may have been unwilling to assist in the capacity increase because doing so might have increased opportunities for competitors to use the lines. Thus, only by integrating were the parties able to increase capacity and income, and the increase derives in part from both the transmission assets and the generation and distribution business. The integration also created economies of scale by allowing the parties to increase output and decrease the per-unit cost of the output. The parties cannot, however, determine the amount by which each resource contributed to the increased output and lower per unit cost.

The inability to determine the amount each resource contributes to the increased output makes it impossible to trace income directly from its source to the owner of the income-producing resource. Tax law needs a system to determine each party's share of a integrated arrangement's income. Some commentators suggest that arrangements should allocate income based upon contributions or capital account balances.⁶⁴ If tax law required the contributor of a resource to recognize a fixed portion of the increased income, the contributor could easily recognize more or less than

Organization, 62 AM. ECON. REV. 777, 779 (1972) ("Team production will be used if it yields and output enough larger than the sum of separable production . . . to cover the costs of organizing and disciplining team members . . ."). They may integrate to reduce the costs of opportunistic behavior. See Benjamin Klein, Robert G. Crawford & Armen A. Alchian, *Vertical Integration, Appropriable Rents, and the Competitive Contracting Process*, 21 J. L. & ECON. 297, 307–24 (1978). For example, if the demand for electricity increased, Transmission Co may be able to raise the per unit cost of transmitting electricity, realizing that Power Co will pay the extra cost to reach more customers. Power Co may be able to increase the amount of its total income by paying more, but its per unit income would decrease. To prevent such opportunistic behavior, Power Co may integrate the ownership of the transmission assets and the generation and distribution business. See *id.* Synergy may, however, also justify not integrating resources. See Rajan & Zingales, *supra* note 9 at 406–20 (suggesting that integration may reduce incentives); *infra* Part IV.A.

63. The increase is equal to the sum of the \$20,000 difference between the income from power generation before integration (\$500,000) and the income from power generation after integration (\$520,000) plus the \$15,000 difference between the income from other companies using the transmission assets before integration (\$20,000) and their using the assets after integration (\$35,000).

64. See, e.g., Mark P. Gergen, *Reforming Subchapter K: Special Allocations*, 46 TAX L. REV. 1, 40 (1990) ("Special allocations should be eliminated and partners required to allocate items according to the relative value of their capital accounts."); William J. Rands, *Passthrough Entities and Their Unprincipled Differences Under Federal Tax Law*, 49 SMU L. REV. 15, 39–40 (1995) (recommend that partnerships be subject to the rules in subchapter S of the Internal Revenue Code, which rules require allocations in proportion to ownership interest in the corporation, see I.R.C. § 1366(a)(1) (2006)). Allocations based on capital accounts should be equivalent to allocations based on contributions because capital accounts equal contributions on the date of formation. See Treas. Reg. § 1.704-1(b)(2)(iv)(b)(1) (as amended in 2008).

the amount resulting from the resource's input.⁶⁵ Assume, for instance, that the transmission assets constitute 20% of the value of the arrangement's total resources and the value of the generation and distribution business assets constitute the other 80% of the total. Allocation based upon the value of contributed resources would require the arrangement to allocate 80% of total income, to Power Co and 20% to Transmission Co. That allocation may not, however, reflect the resources' relative effect on the arrangement's income.

An example, illustrates potential disparity between the relative value of contributed resources and the resources' relative effect on the arrangement's income. The facts of the hypothetical indicate that the overall income of the resources increased from \$520,000 before integration to \$555,000 after.⁶⁶ Prior to the integration, the transmission assets appear to have generated \$70,000 of total \$520,000 of income, or roughly 13% of the total. After the integration, one estimate would suggest that the transmission assets generate \$87,000 of the total \$555,000 of the arrangement's income, or roughly 16% of the total.⁶⁷ If these numbers are accurate, they suggest that an 80%-20% split is inappropriate. The estimated amount of income each asset generates is not in proportion to the asset's value. Thus, allocations based on the value of contributed resources are not good. A more appropriate allocation would reflect the resources' relative effect on the arrangement's total income, but determining such relative effect may be impossible.

Market transactions do not necessarily reveal a resources income-producing capacity. Prior to integration, the parties could trace income based upon ownership to estimate each resource's effect on total income. Such an estimate is subject to error, however, because various factors affect the parties' agreement prior to the exchange. For example, Transmission Co might have been in a position to charge a premium for the use of the transmission assets because a recent storm may have debilitated other assets that provided an alternate route to some end users. If that were the case, the \$50,000 may not have reflected the effect the transmission assets had on total income but may reflect the consequence of Transmission Co's favorable bargaining position. Pre-integration arms'-length negotiations do not necessarily indicate the extent to which a particular resource affects income. Following integration, arm's-length negotiations no longer exist to inform the analysis. Thus, determining each resource's effect on income

65. See Borden, *supra* note 27 at 340-44 (describing the effects of allocations based upon capital contributions in arrangements that allocate economic items in a proportion that deviates from the proportion of capital account contributions).

66. The income before integration was the sum of Transmission Co's \$70,000 of income and Power Co's \$450,000 of income. The income after integration was the \$520,000 from operations and \$35,000 from users of transmission assets.

67. The \$87,000 assumes the transmission assets account for the same \$50,000 plus 10% (\$50,000 paid by Power Co to use the assets divided by Power Co's \$500,000 revenue) of the \$20,000 increase (or \$2,000), plus all \$35,000 of increase from third-party users.

becomes even more difficult, probably impossible.

Furthermore, observation cannot determine the extent to which a resource affects an arrangement's income. For example, the increase in income after integration may be largely attributable to Power Co's effort to find new customers, so an 80%-20% split would be inappropriate. Perhaps, however, the increased income arises primarily from new technology that Transmission Co installed that made the lines more efficient. Allocating a larger portion of the increased income to Transmission Co would therefore seem appropriate. Reality is, however, that the parties cannot trace the income from the resources based upon the resources' comparative values. Neither the taxpayers nor the IRS can accurately determine the percentage of extra income that either party is entitled to based on contributions. Thus, tax law generally cannot allocate the income of integrated arrangements based upon the extent to which the resources affect the arrangement's income.

Partnership taxation solves the allocation difficulty with its tax allocation rules, which generally defer to the party's allocation agreement.⁶⁸ The partnership tax allocation rules serve two important functions: (1) they recognize the parties' use of allocations to reduce agency costs, and (2) they contemplate the inability to trace income from the arrangement's resources. For example, Power Co and Transmission Co may decide to allocate 90% of the arrangement's income to Power Co to ensure that Power Co efficiently produces the electricity and vigilantly markets and distributes it. Such an allocation does not reflect the parties' understanding of the resources relative value. Instead, it is a mechanism to reduce agency costs. Tax should recognize the parties' use of economic items to reduce agency costs.

Members of partnerships are entitled to their contributions and allocations upon partnership liquidation.⁶⁹ The allocations therefore affect each party's residual risk in the arrangements and, consequently, their economic interest in the arrangement. Because the parties cannot determine the amount of income that derives from their respective contributions, tax

68. See I.R.C. § 704(a) (2006). Tax law respects allocations in a partnership agreement, if they have substantial economic effect. See I.R.C. § 704(b)(2) (2006). The test for substantial economic effect is a complicated tax comprising numerous pages of regulations. See Treas. Reg. § 1.704-1 (as amended in 2008). The apparent lack of reported case in which the IRS challenged allocations under the test for substantial economic effect indicates that the test's complexity dissuades the IRS from implicating it in audits.

69. See UNIF. P'SHIP ACT § 401(a) (1997), 6 U.L.A. 133 (2001) (crediting partners' accounts with their shares of partnership profit); *Id.* at § 807(b), 6 U.L.A. 206 (providing that upon liquidation the partnership shall make distributions to the partners in accordance with their accounts). In the case of a limited liability company, which tax law treats as a partnership by default, see Treas. Reg. § 301.7701-3(a) (as amended in 2006), the members must agree that distributions will be made based upon contributions and allocations of profits. See UNIF. LTD. LIAB. CO. ACT § 110(a)(1) (2006), 6B U.L.A. 442 (2008) (providing that operating agreement governs relations among the members and the limited liability company). Otherwise, the law requires distributions to be made in equal shares among the members. See UNIF. LTD. LIAB. CO. ACT § 708(b)(2) (2006), 6B U.L.A. 514 (2008); Borden, *supra* note 22 (discussing the residual risk of traditional noncorporate entities).

law should rely upon the allocations to determine the parties' shares of the arrangement's income.⁷⁰ Relying upon the parties' allocation is a second-best solution to the problem created by the inability to trace income from its source. Such reliance requires tax law to recognize integrated arrangements as entities separate from their members. That recognition triggers the need for other rules.

The recognition of the separate entity requires tax law to ask whether an integrated arrangement should allocate items to its members as they arise, or on a periodic basis. If the arrangement were to allocate items as they arise, it would encounter significant accounting difficulties.⁷¹ If the partners have different taxable years, shares of the same item may appear in partner taxable years that could end almost a year apart and provide partners the opportunity to defer tax.⁷² That difference in timing could be significant and inequitable since portions of the same item would be taxed at significantly different times. Partnership tax law has established rules regarding the partnership tax years to minimize such differences.⁷³ To ensure that each partner accounts for items in a similar manner, partnership tax must govern the computation of income that it allocates to the partners.⁷⁴ Partnership tax has rules for computing partnership taxable income.⁷⁵ Tax law also needs tools to properly allocate pre-contribution

70. If the arrangement were a state-law partnership, the partnership would allocate economic items to the partner in proportion to the value of assets contributed to the partnership, UNIF. P'SHIP ACT § 401(a) (1997), 6 U.L.A. 133 (2001), only if the partnership agreement did not provide for disproportionate allocations. UNIF. P'SHIP ACT § 103(a) (1997), 6 U.L.A. 73 (2001). Thus, if the partnership agreement provides for allocations that differs from the proportions of contributed assets, the partners do not have a legal right to a proportionate share of income from the partnership. Allocations of taxable income in proportion to contributions would therefore be contrary to the economic arrangement.

71. See H.R. REP. NO. 72-708, at 53 (1932) ("Moreover, a strict observance of the letter of the prior acts would have required each member to determine his annual share in the syndicate gains or losses upon the basis of his own accounting period and according to his own method of accounting, irrespective of the accounting period or method of accounting upon which the books or records of the syndicate were kept.").

72. For example, if the partnership had income on December 31, a partner with a calendar year taxable year would have to report and pay tax on that income immediately. If another partner had a taxable year that ended on November, 30, that partner would not report the partnership income until almost a year after the partnership had the income. Timing problems can also arise even if the partners have the same taxable year. See Christopher H. Hanna, *A Partnership's Business Purpose Taxable year: A Deferral Provision Whose Time Has Passed*, 45 TAX LAW. 685, 688-89 (1992) (describing the potential for deferral, if the partners were allowed choose a partnership taxable year); J. Paul Jackson, Mark H. Johnson, Stanley S. Surrey & William C. Warren, *A Proposed Revision of the Federal Income Tax Treatment of Partnerships and Partners—American Law Institute Draft*, 9 TAX L. REV. 109, 117 (1954) (explaining that partners could postpone payment of tax on partnership income for up to twenty-three months).

73. See I.R.C. § 706 (2006) (providing several rules for determining partnership taxable years).

74. See Bradley T. Borden, Sandra Favelukes & Todd E. Molz, *A History and Analysis of the Co-Ownership-Partnership Question*, 106 TAX NOTES 1175, 1176 (March 7, 2005) (observing that the Congress enacted rules regarding the computation of taxable income to consistently tax individuals who invested in partnerships).

75. See I.R.C. § 703(a) (2006) (providing rules for computing partnership taxable income).

gain and loss. For instance, if the transmission assets had substantially appreciated prior to contribution, Transmission Co should recognize that pre-contribution gain, if the partnership were to later sell the transmission assets.⁷⁶ Partnership tax law requires a contributing partner to recognize pre-contribution gain and loss.⁷⁷ Other rules, such as those treating the partnership as holding the assets of the partnership and the partners as holding interests in the partnership, help further ease the administration of tax on partnership income.⁷⁸ Still others, such as those governing the allocation of partnership liability, help preserve the flow through of items and establish the partners' tax bases in their partnership interests.⁷⁹ The rules other than the allocation rules aid tax administration, prevent abuse, and help preserve the aggregate nature of partnership taxation. Those rules become important once tax law recognizes an arrangement must follow allocation rules.

Partnership tax is therefore necessary for integrated arrangements. It should not, however, be available for nonintegrated arrangements. If Transmission Co owns only transmission assets, all of its income comes from those assets, and any income Power Co assigns to Transmission Co will be income to Power Co from Power Co's business and a payment to Transmission Co for the use of the transmission assets. Transmission Co would recognize the assignment as income from its property. The amount paid to Transmission Co does not alter the source of the income to Power Co. General principles of income tax govern nonintegrated arrangements. Thus, partnership taxation should be reserved only for integrated arrangements.

Even though partnership tax should apply only to integrated arrangements, tax policy suggests that it should not apply to all integrated arrangements. The need for partnership tax arises only if tracing income from its source is impossible. If parties to an integrated arrangement can trace income from its source, partnership tax should not apply to their arrangement. As the following discussion illustrates some integrated arrangements therefore do not require a separate tax regime.

76. See J. Paul Jackson, et al., *supra* note 72 at 121 (1954) (observing that the contributing party should bear the tax burden of gain accrued prior to the contribution of property to a partnership).

77. See I.R.C. § 704(c) (2006) (requiring the partners to allocate tax items in manner that takes into account pre-contribution gain and loss).

78. The rules treat the partnership as holding the partnership assets. See I.R.C. § 723 (2006) (treating the partnership as owning contributed property for purposes of determining the property's basis). The rules separating partner assets from the partners generally treat partners as holding an interest in the entity, not the partnership assets. See I.R.C. § 741 (2006). Thus, if a partner sales a partnership interest, it does not have to determine the amount of each partnership asset it has sold. If, however, the partnership has ordinary-income assets, the partner must recognize a share of the unrealized income of such assets. See I.R.C. § 751 (2006).

79. See I.R.C. § 752 (2006) (governing the treatment of changes in partners' shares of partnership liability); § 722 (governing the tax basis of the partners' interests in the partnership).

C. Disregarded Integrated Arrangements

Integrated arrangements do not need the partnership tax allocation rules if the parties can determine their shares of the arrangement's income under the general principles of income tax. An example of an integrated arrangement that does not require a separate tax regime is mere co-ownership of property. Consider an example of co-owned property. Transmission Co owns transmission assets. It leases them to Power Co, and Power Co maintains them. Transmission Co's ownership is therefore passive, it provides no services. Transmission Co has only rental income. To diversify its holdings Transmission Co transfers a one-third interest in the transmission assets to Investor. In exchange, Investor transfers a two-thirds interest in an easement to Transmission Co. Following the exchange, Transmission Co owns a two-thirds interest in both the transmission assets and the easement and Investor owns a one-third interest in both assets. The easement provides the owner the right to construct power lines on the property but requires no services.⁸⁰ Transmission Co and Investor hold the transmission assets and the easement as tenants in common. Neither Transmission Co nor Investor provides any services with respect to the transmission assets or the easement. The state imposes property tax on the transmission assets, but that is the only cost Transmission Co and Investor must pay with respect to either property. The only income the properties generate is the income received from Power Co and appreciation in both parties' value.

This arrangement does not present difficult tax accounting problems, and the general principles of income tax would apply to it.⁸¹ Transmission Co owns a two-thirds interest in the transmission assets, so it should pay two-thirds of the property tax and receive two-thirds of the income from the assets. Investor, as a one-third owner should pay one-third of the property tax and receive one-third of the income.⁸² In this arrangement,

80. The transaction may or may not be tax free. If the properties are like kind, the transaction may qualify for nonrecognition. See I.R.C. § 1031(a)(1) (2000) (granting nonrecognition to certain exchanges of like-kind business- or personal-use property). On the other hand, contributions of property to tax partnerships are not taxable, unless perhaps the transaction also includes liability relief for the transferor. See I.R.C. § 721(a) (2000) (providing for the tax-free transfer of contribution of property to a partnership); I.R.C. § 752(b) (2000) (providing that decreases in personal liability are treated as distributions from the partnership); I.R.C. § 731(a) (2000) (providing that distributions in excess of outside basis create gain for the distributee); Treas. Reg. § 1.707-5(a)(1) (1992) (providing that certain transfers of property to a partnership are disguised sales, if the partner is relieved of non-qualified liability as part of the transaction).

81. The formation of the co-ownership arrangement probably qualifies for nonrecognition as a like-kind exchange. See I.R.C. § 1031 (a)(2006). After formation, the tax question turns to allocating income from the properties to the co-owners.

82. As tenants in common, a co-owner who pays the entire amount of property tax should be able to bring an action for contribution. See John V. Orth, *Tenancies in Common*, in 4 THOMPSON ON REAL PROPERTY §32.07(b) (David A. Thomas ed., 2d ed. 1994). A party who did not receive a proportionate share of the income of the property could bring an action of account to recover the share of income. See *Id.* at § 32.07(c). Rules of offset would apply to allow a party that pays all of the tax to

Transmission Co and Investor each hold the unitary risk of their respective interests in the properties.⁸³ Because together they control the rights not contracted away they share the residual risk of each property as a whole. By contract, they can establish how they will share that control, or, under common law, each party could exercise it individually.⁸⁴ If one party acts without the consent of the other, the non-acting party could partition the property or dispose of its interest in the property, which would likely encourage parties to make decisions together.⁸⁵ Sharing the residual risk in the property as a whole does not create a need for a separate tax regime, if the property is the sole source of revenue and expense.

An example illustrates how shared residual risk in simple co-ownership arrangements does not add complexity to the tax system. Suppose that the state property tax on the transmission assets is \$21,000 and the revenue from Power Co is \$75,000. The tax expense and revenue derive from the transmission assets and only the transmission assets. There is no doubt what share each person has in the property's income. Consequently, the parties can trace their shares of the property's revenue and expense directly from their undivided interests in the property. They each share in the total revenue and expenses of the property based upon their ownership interests. Thus, the arrangement should allocate two-thirds or \$50,000 of revenue and two-thirds or \$14,000 of the tax expense to Transmission Co and the remaining portion of each to Investor. Any division of income other than that would violate the assignment-of-income doctrine. For example, if the parties agreed to allocate \$60,000 of the revenue to Transmission Co, it would have allocated to Transmission Co \$10,000 of revenue derived from Investor's interest in the property. The assignment-of-income doctrine would require Investor to recognize the full amount of income derived from its interest, regardless of the parties' allocation agreement.

The parties are likely liable for a proportionate share of the \$21,000 of

offset that amount with income received in excess of the proportionate share of income. *See Id.* at § 32.07(b). Thus, if Transmission Co were to pay all of the tax of the property, it could retain an amount of income received equal to Investor's one-third share of the tax. If a state separately assesses property tax on the undivided interest, a co-owner who pays the tax for another co-owner may have no action for contribution. *See Id.*

83. Under common law, the parties could dispose of the interests without the consent of the other party or could partition the property. *See Id.* at § 32.02. The parties may, however, place transfer restrictions on those rights to ensure that an unknown party does not become a co-owner. *See Borden, supra* note 35 at 429–34 (discussing reasons why co-owners may impose transfer restrictions). Such a restriction would simply carve out some rights but would not transfer the residual risk in the property.

84. *See* BRADLEY T. BORDEN, TAX-FREE LIKE-KIND EXCHANGES, F-1 *et seq.* (2008) (providing examples of co-ownership and management documents used by some tenants in common); Orth, *supra* note 82 at § 32.07(b) (implying that a co-owner in possession can improve the property and manage it for profit).

85. *See Id.* at § 32.07 (recognizing that courts are slow to impose remedies because parties have the right to exit a contentious relationship through partition). If partition is an economically unwise alternative, the parties would generally make efforts to avoid contentions that lead to partition.

tax.⁸⁶ Their obligations for the tax do not complicate matters. If Investor were to fail to pay its portion of the tax, Transmission Co could recover from the property's revenue any portion of Investor's share of the tax that it paid.⁸⁷ For instance, if Transmission Co paid all \$21,000 of the tax, it would have paid Investor's one-third portion (\$7,000) and should be able to recover that amount from the rent Power Co pays. Thus, instead of taking \$50,000, Transmission Co may be able to take \$57,000 of the revenue. The offset balances the revenue and expenses and ensures that the parties share the income from the property in proportion to their ownership interests. The arrangement does not need allocation rules to determine the parties' shares of economic items; it can allocate the items based upon ownership interests. Because it does not need allocation rules, the other aspects of a separate tax regime (such as the partnership basis rules, separate taxable year, and income-computation rules) become unimportant.

The difference between the Investors-Transmission Co co-ownership arrangement and the Power Co-Transmission Co integrated arrangement is that the Investor-Transmission Co co-ownership arrangement did not integrate any services. The prior section illustrated that the source of income becomes unclear if parties integrate services into an arrangement. Arrangements that integrate services require a separate tax regime because such integration makes tracing income from its source impossible.⁸⁸ The parties cannot determine the extent to which services and other resources account for the income. The Power Co-Transmission Co arrangement would make no income if Power Co did not use its assets and services to generate and sell the electricity, but it would also fail to make income if the arrangement could not transmit the electricity, which requires the transmission assets. All resources contribute to the arrangement's income, but no one can determine the extent to which each resource contributes. The inability to determine the specific source of income requires allocation rules and the other accoutrements of a separate tax regime. In the case of a mere co-ownership arrangement (i.e., no integrated services), however, the parties should be able to trace income from their respective interests in the property.⁸⁹ Tax law should disregard such arrangements because general principles of income tax are sufficient to determine each party's tax situation.⁹⁰

86. See *supra* note 82 (discussing the parties' rights for account and contribution).

87. See Orth, *supra* note 82 at § 32.07(b).

88. See *supra* Part II.B.

89. This would be the case even for arrangements that divide ownership of multiple properties in different proportions. For example, Alvin, Theodore, and Simon may each own a one-third interest in Black Forest and Alvin and Theodore could each own a 40% interest in White Forest with Alvin owning the remaining 20%. Even though Alvin, Theodore, and Simon own the properties in different proportions, each person can determine his respective share of revenue and expense from the different parties. They do not need a separate tax regime to help allocate the property's revenue and expense.

90. Applying partnership tax to arrangements that do not need it provides opportunities for abuse. See Borden, *supra* note 39 at 951–56.

Several general principles distill from this review of the fundamentals of partnership tax theory. First, general principles of income taxation should govern nonintegrated arrangements. Second, because tracing income from its source is impossible in arrangements that integrate services, general principles of income taxation are insufficient to govern such arrangements. Tax law must recognize such arrangements as entities separate from their owners and apply a separate tax regime to properly allocate the arrangement's income to the members. Third, members of co-ownership arrangements can trace income from their respective interests in their property, so they do not require a separate tax regime. If parties integrate only property, general principles of taxation are sufficient to determine each member's share of the arrangement's income. Those principles are fairly well established in tax law and theory. The question remains whether tax law should provide exceptions to any of those principles. The following Part suggests that some arrangements that include services should not be subject to a separate tax regime. The discussion illustrates that the depth of integration often should affect whether an arrangement should be subject to partnership taxation.

III. PRODUCTION-ORIENTED ECONOMIES OF SCALE

For various reasons, business participants may integrate resources to varying depths of the production process. Some may integrate the entire process, such as Transmission Co and Power Co did in the earlier example. Others may integrate only certain strata of the production process. For example, parties may integrate the production of raw materials but use the materials in separate manufacturing processes. Others may integrate the manufacturing process but separately distribute the output to end users. Limited-strata integration raises the classification question. Under the general principles distilled above, an arrangement that integrates the production process, but not the distribution process, would be a tax partnership because the arrangement integrates property and services. The IRS, Tax Court, and Seventh Circuit all take the position that arrangements with such limited-strata integration are tax partnerships. This Article contends that conclusion is unfounded. Economic and technical analysis suggest that some arrangements with limited-strata integration should not be tax partnerships.

A. Shared Production-Oriented Economies of Scale

To increase electrical output, many utilities turned to nuclear power during the twentieth century. Often, however, the cost of constructing a nuclear power plant could discourage single power companies from

constructing such plants.⁹¹ Various factors, including regulation could limit power companies' markets. The additional revenue raised by providing additional power to a limited market may not cover the costs of constructing and operating a new plant.⁹² That additional cost for small scale output represented a typical barrier to entry, which prohibited power companies from providing services efficiently to fill existing and potential demand.⁹³ For example, if a power company were operating at full capacity, it could provide power to additional customers only if it were to add more capacity. The revenue from one (or a few) additional customer would not, however, justify the cost to construct and operate a new plant. A company could justify the cost of a plant only if it had sufficient demand for the new plant's output to generate economies of scale.

Power companies could, however, justify the cost of additional capacity if they did not have to bear the full burden of constructing and operating the plant. One solution to that problem was for multiple companies to share the cost of constructing and operating a plant and take power in kind from the joint effort and sell it individually to customers. The members of such arrangements would integrate resources to construct and operate the power plants (i.e., to perform the production function). The members would own and operate the plant as tenants in common. The companies would not, however, share ownership of the power produced by the co-owned plant. Instead, the companies would separately take shares of the plant's power equal to their proportionate ownership and distribute and sell the power individually (i.e., they would individually perform the distribution function). Under those co-owned joint-production arrangements, the parties integrated the production function but not the distribution function. In other words, the companies shared the residual risk of the production function, but they individually held the residual risk of the product, and distribution function. By integrating the production function, the companies jointly created and shared economies of scale, reducing the per-unit cost of electricity and making the provision of additional power profitable.

The shared economies of scale are very valuable. Each member of such scale-sharing arrangements can increase profit relative to operating the production function alone. For example, assume Power Co would incur a cost of \$200 per unit of output from a wholly-owned plant and could sell

91. See Silberston, *supra* note 1 at 376–78 (identifying market size as one factor that affects economies of scale).

92. A person would incur the cost to construct a new plant only if it provided the minimum optimum or efficient scale. See *id.* at 369. If the market is too small for one plant to operate at minimum optimum scale, then the scale will be too small in that market for even one plant to produce efficiently in that market. *Id.* at 377.

93. See Richard Schmalensee, *Economies of Scale and Barriers to Entry*, 89 J. POL. ECON. 1228, 1230 (1981) (providing that minimum capacity is needed for a firm to enter an industry). Capacity requirements that limit entry into an established market would also apply to providing electricity to one additional customer, if providing that additional electricity would require additional capacity.

a unit for \$210. Power Co's profit would be only \$10. If Power Co joined a co-owned joint-production arrangement that created economies of scale and reduced the per-unit cost of electricity by \$50, Power Co's per-unit profit would increase by \$50.⁹⁴ Thus, sharing economies of scale increases Power Co's profit, and presumably would increase the other members' profit.

Co-owned joint-production arrangements are not uncommon structures for the production of fungible products. Thus, they appear in power generation,⁹⁵ mining,⁹⁶ and oil and gas production.⁹⁷ They also could prove to be useful in agriculture, timber, and perhaps some manufacturing operations.⁹⁸ The U.S. Tax Courts, and Seventh Circuit all take the position that the shared economies of scale make such arrangements tax partnerships. The seminal case addressing the classification of co-owned joint-production arrangements comes from the Seventh Circuit. The Article challenges its reasoning and conclusions.

B. Classification of Production-Oriented Economies of Scale

In *Madison Gas and Electric Co. v. Commissioner*, the Seventh Circuit held that a co-owned joint-production arrangement was a tax partnership.⁹⁹ The question before the court was whether the taxpayer,

94. Profit from wholly-owned plant was \$10 (\$210 revenue minus \$200 cost) and would be \$60 (\$210 revenue minus \$150 cost).

95. See, e.g., *Madison Gas & Elec. Co. v. Comm'r*, 633 F.2d 512, 517 (7th Cir. 1980) (holding that arrangement was a tax partnership); Rev. Rul. 68-344, 1968-1 C.B. 569 (ruling that an arrangement was a tax partnership).

96. See, e.g., I.R.S. Priv. Ltr. Rul. 8315003 (June 17, 1982) (ruling privately that mining arrangement was a tax partnership).

97. Typical oil and gas co-owned joint-production arrangements, have several common features: "(1) The members prorate costs of development and operation among themselves in accordance with their respective interests; (2) generally, any party may take his share of the oil in kind, but grants authority to the operator to market the oil; (3) the operator carries insurance and makes an accounting; (4) operating agreements generally remain in force until the mineral is exhausted or, for the term of the lease; (5) the parties have voting power proportionate to their interests to choose and advise the operator, to change the operator, to determine drilling and operating plans, to audit and pass on the operator's accounting, and to pass on transactions for disposal of surplus equipment; (6) any party may sell or encumber his entire interest, but may not subdivide or sell without giving the others preferential option; and (7) the liabilities of the parties are to be separate and not joint." See I.T. 3930, 1948-2 C.B. 126. See also Rev. Rul. 83-129, 1983-2 C.B. 105; Rev. Rul. 65-118, 1965-1 C.B. 30. If the members have no control over the disposition of the property received from the arrangement, the arrangement would not satisfy this definition of co-owned joint-production arrangement.

98. Agriculture and timber operations produce fungible products, so they lend themselves to co-owned joint-production arrangements. To the extent manufacturing produces a fungible product, they too may lend themselves to co-owned joint-production. The member could take the output in kind and market it under separate brands or incorporate it in other products.

99. See *Madison Gas & Elec. Co. v. Comm'r*, 633 F.2d 512, 517 (7th Cir 1980), *aff'g* *Madison Gas & Elec. Co. v. Comm'r*, 72 T.C. 521 (1979). The taxpayer in *Madison Gas* was a member of a typical co-owned-joint-production arrangement. *Id.* at 513-14. The taxpayer, Madison Gas and Electric Co. wished to deduct expenses incurred training employees to operate and manage the new co-owned electricity plant. *Id.* at 514. The IRS took the position that the arrangement was a new venture

Madison Gas and Electric Co. (MGE) could deduct the cost of training employees at the new plant.¹⁰⁰ The deductibility turned on whether the arrangement was a tax partnership.¹⁰¹ The court relied upon a technical analysis of the definition of tax partnership to hold that the arrangement was a tax partnership.¹⁰² In considering the classification of the arrangement the court asked whether the members of the arrangement satisfied the purported joint-profit-motive test of the definition of tax partnership.¹⁰³ The ambiguous nature of the definition of tax partnership makes it one of the most difficult concepts in tax law,¹⁰⁴ and the court appears to have bungled the analysis.

The definition of tax partnership derives from the British common law definition of partnership.¹⁰⁵ That definition largely survives today in substantive (i.e., non-tax) law: “an association of two or more persons to carry on as co-owners a business for profit.”¹⁰⁶ Three elements emerge from that definition: (1) association, (2) co-ownership, and (3) joint profit. Commentators generally consider joint profits to be “a necessary condition

and the taxpayer incurred the costs in the start-up and could not deduct them currently. *Id.* Under current law, start-up costs generally are not deductible when incurred, but must be amortized over several years. See I.R.C. § 195 (2006). Taxpayers may, however, deduct costs incurred to expand an existing business. See *Briarcliff Candy Corp. v. Comm’r*, 475 F.2d 775, 787 (2d Cir. 1973). Thus, the taxpayer unsuccessfully argued that the costs incurred the training costs to expand its existing power generation and distribution business.

100. See *Madison Gas & Electric Co. v. Comm’r*, 633 F.2d at 514.

101. See *id.*

102. See *id.* at 517.

103. See The taxpayer argued that it and the other co-owners did not have a joint profit in the arrangement because they took power in kind and distributed it to their respective customers individually. See *id.* at 515. The court rejected the taxpayer’s argument and held that the parties had a joint-profit motive and that the arrangement was a tax partnership. See *id.*

104. See MCKEE, NELSON & WHITMIRE, *supra* note 26 at ¶3.01[1] (“[P]erhaps the most difficult . . . problem in the taxation of partnerships and partners is determining whether a particular financial, business, or otherwise economic arrangement constitutes a partnership for income tax purposes.”); Borden, *supra* note 39 at 936.

105. See, e.g., *Comm’r v. Tower*, 327 U.S. 280 (1946) (citing British precedent, *Cox v. Hickman*, 8 H.L. Cas. 268 (1860) to decide whether an arrangement was a tax partnership).

106. UNIF. P’SHIP ACT, § 101(4) (1996), 6 U.L.A. 61 (2001). The U.P.A. definition is very similar to the definition at the time Congress enacted the income tax statute. The English Partnership Act, 1890, provided, “Partnership is the relation which subsists between persons carrying on business in common with a view to profit.” English Partnership Act, 1890, 53-54 Victoria, ch. 39, § 1(1), cited in J.M. BARRETT & ERWIN SEAGO, *PARTNERS AND PARTNERSHIPS LAW AND TAXATION*, Chapter 2, § 1 (The Michie Company, 1956). Contemporary commentators defined partnership as a “legal relation based upon the express or implied contract of two or more competent persons whereby they unite their property, labor or skill in carrying on some lawful business owned in common, with a view to a profit to be shared by them.” FLOYD R. MECHEM, *LAW OF PARTNERSHIP 1* (Callaghan and Company, 1920), cited in J.M. BARRETT AND ERWIN SEAGO, *PARTNERS AND PARTNERSHIPS LAW AND TAXATION*, Chapter 2, § 1, footnote 3 (The Michie Company, 1956). Courts also used a similar definition. See, e.g., *Eilers Music House v. Reine*, 133 P. 788 (1913) (“A partnership is an agreement between two or more persons to unite labor, skill, money and property, or either, in a lawful business for their mutual benefit.”). This Article use the term “substantive law” to refer to non-tax law.

for the existence of a partnership.”¹⁰⁷ In limited situations, a partnership may exist without joint profit “if there is strong evidence of other indicia of co-ownership or subjective partnership intent, as when a mere wage earner is a party to an agreement that explicitly labels the business as a partnership.”¹⁰⁸ Thus, if the parties choose to treat an arrangement like a partnership, the arrangement will be a partnership even absent a joint-profit motive. Otherwise, the substantive law definition of partnership appears to require a joint-profit motive.¹⁰⁹ Substantive law classification is important for determining the legal rights and obligations of an arrangement’s members.¹¹⁰ The joint-profit motive test should consider the legal ramifications of substantive law classification of an arrangement.

The reason supporting substantive law classification may, however, be irrelevant in the tax context.¹¹¹ Nonetheless, tax law appears to have erroneously adopted the joint-profit motive test. Joint profit incorporates the other two elements of the substantive-law definition of partnership. For parties to have a joint profit, they must be co-owners and engage in business together. Joint profit therefore differs from profit sharing, which would not require co-ownership or business association. This distinction can be very important. By incorporating the substantive-law definition of partnership, the definition of tax partnership has incorporated the joint-profit motive test.¹¹² Determining whether an arrangement has joint profit often turns on the adopted definition of profit, a non-technical term that the Seventh Circuit had to contract in its holding.

Three potential definitions of profit exist: (1) an accounting definition, (2) a balance sheet definition, and (3) a dictionary definition. The accounting definition of profits is “net income, or the difference

107. ALAN R. BROMBERG & LARRY E. RIBSTEIN, *BROMBERG AND RIBSTEIN ON PARTNERSHIP*, § 2.07(b)(2) (Aspen Publishers, 2005). This view is different from the original view that considered joint profit to be sufficient to establish the existence of a partnership. *See id.* at § 2.07(b)(3) (“Every man who has a share of the profits of a trade ought also to bear his share of the loss. And if anyone takes part of the profit, he takes a part of that fund on which the creditor of the trader relies for his payments.” (quoting *Grace v. Smith*, 2 Wm. Bl. 998, 1000, 96 Eng. Rep. 587, 588 (1775)) and citing *Waugh v. Carver*, 2 H. Bl. 235, 126 Eng. Rep. 525 (1793); *Leggett v. Hyde*, 17 Am. Rep. 244 (1874); *Wessels v. Weiss*, 31 A. 247 (1895); *Cox v. Hickman*, 8 H.L. Cas. 268, 11 Eng. Rep. 431 (1860); UNIF. P’SHP ACT § 7(4) (1914) (providing that profit sharing is prima facie evidence that the recipient is a partner, but exceptions apply to that general rule) and UNIF. P’SHP ACT § 202(c)(3) (profit sharing is only rebuttably presumptive of partnership).

108. *Id.*

109. *See* UNIF. P’SHP ACT § 308(a) (1997), 6 U.L.A. 128 (2001) (“If a person by words or conduct, purports to be a partner, or consents to being represented by another as a partner, in a partnership or with one or more persons not partners, the purported partner is liable to a person to whom the representation is made, if that person, relying on the representation, enters into a transaction with the actual or purported partnership.”). This is a continuation of “the basic principles of partnership by estoppel from UPA Section 16. . . .” 6 U.L.A. 129, comment.

110. *See id.* at § 2.02(b) (enumerating situations in which the question of partnership arises).

111. *See* Borden, *supra* note 39 at 974–75 (suggesting that the policy reasons for the substantive-law definition of tax partnership may be different from the policy reasons for the definition of tax partnership and that the two definitions should be different).

112. *See id.* at 984–91.

between revenues and expenses, for a given accounting period.”¹¹³ The accounting definition is comparable to the definition of taxable income, which is gross income minus deductions.¹¹⁴ The balance sheet definition refers to profits as money that remains after a partnership pays all liabilities and returns partner contributions.¹¹⁵ This definition would take into account the appreciated value of partnership assets.¹¹⁶ It is comparable to the economic concept of residual risk and requires perfect information to compute on an annual basis.¹¹⁷ Economic theory suggests that the allocation of residual risk is important in distinguishing between tax corporations and tax partnerships.¹¹⁸ The dictionary definition is the “benefit or advantage accruing from the management, use, or sale of property from the carrying on of any process of production, or from the conduct of business.”¹¹⁹ The dictionary definition of profit is broad enough to include non-pecuniary benefits such as physical appointments of an office and personal relations, which can pose measurement problems.¹²⁰ None of the definitions has emerged as the clear leader for purposes of defining tax partnership, which adds to the definition’s ambiguity. The reliance on a non-technical term for tax purposes further raises questions about the Seventh Circuit’s decision.

The distribution of product in kind from a co-owned joint-production arrangement raises the question of whether the members of such an arrangement have joint-profit-motive and should be a tax partnership. The IRS originally took the position that co-owned joint-production arrangements may not be tax partnerships.¹²¹ Following the enactment of the definition of tax partnership, which included several types of unincorporated arrangements, the IRS changed its position and ruled that a co-owned joint-production arrangement was a tax partnership.¹²² The IRS stated that “ordinarily joint or co[-]ownership of property does not of itself

113. BROMBERG & RIBSTEIN, *supra* note 107, at § 2.07(b)(4) (citing FIFLIS, KRIPKE & FOSTER, ACCOUNTING FOR BUSINESS LAWYERS, 154 (3d ed. 1984)).

114. See I.R.C. § 63(a) (2006).

115. BROMBERG & RIBSTEIN, *supra* at § 2.07(b)(4) and note 19.

116. *Id.* at § 2.07(b)(4) and note 19.

117. See Borden, *supra* note 22.

118. See *Id.*

119. City of Englewood v. Commercial Union Assurance Cos., 940 P.2d 948, 957 (Colo. Ct. App. 1996) (citing WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY 1811 (1986) to hold that cost sharing supported partnership classification because the resulting savings were a benefit to the parties).

120. Such non-pecuniary benefits flowing to one member of an arrangement may be deemed costs to another member. See Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 J. Fin. Econ. 305, 312 (1976).

121. See Regulations 74, Art. 1317 (1931) (“Coowners of oil lands engaged in developing the property through a common agent are not necessarily partners.”).

122. I.T. 2749, XIII-1 C.B. 99 (1934) (“In the instant case the co-ownerships of the oil and gas leases and the operations thereunder may be fairly considered as falling within the broad scope of the term ‘joint venture.’ ...It is true that ordinarily joint or coownership of property does not of itself constitute a partnership but it is also true that when the coowners or joint owners agree to employ such property in the carrying on of a trade or business they become partners (47 C.J., 702).”).

constitute a partnership . . . [but,] when the coowners or joint owners agree to employ such property in the carrying on of a trade or business, they become partners.”¹²³ The enactment of a broad statutory definition of tax partnership appears to have influenced the IRS’s change of position. The statutory definition included joint ventures,¹²⁴ so once the IRS found that the arrangement was a joint venture (as substantive-law question) it was bound to rule it was a tax partnership. The ruling was clearly based on a technical reading of the statute.

Later, the IRS rendered a theoretically-tenable conclusion regarding co-owned joint-production arrangements. The IRS exempted co-owned joint-production arrangements from the partnership tax accounting and reporting rules.¹²⁵ That exemption created the first qualified tax partnership and took some of the sting out of its earlier ruling.¹²⁶ Unfortunately, the IRS left no clue about why it exempted qualified tax partnerships from the partnership tax accounting and reporting rules.¹²⁷ The partnership tax and accounting rules, including the allocation rules, are the heart of partnership taxation. The effect of exempting co-owned joint-production arrangements from those rules is similar to ruling that the arrangements are not tax partnerships. Subsequent rulings illuminate the

123. I.T. 2749, XIII-1 C.B. 99 (1934), *citing* 47 C.J. 702. (The arrangement between the members provided that (1) the gross revenue from such properties would be paid to and accounted for by the co-owners monthly, (2) the co-owners would pay expenditures in the development and operation of the properties monthly, (3) gross and net income would be settled monthly, and (4) the accounting method would result in a complete periodical account for revenue and expense in the same manner as in the case of a separate piece of property.).

124. See Revenue Act of 1932, ch. 209, § 1111(a)(3), 47 Stat. 289, 289.

125. See I.T. 2785, XIII-1 C.B. 96 (1934). The ruling allowed the operating co-owner to file a partnership informative return Form 1065 and an attached schedule provided by the IRS. The schedule was required to show the (1) total working interest, (2) names and addresses of the co-owners, (3) the percentage of each co-owner’s interest in the co-ownership, (4) total costs and expenses billed each co-owner with respect to drilling for and producing oil and gas, and (5) the total revenue credited in those cases where the operating co-owner distributed revenue to the other co-owners (by way of credit or cash) from the sale or other distribution of the co-owners’ oil and gas. See *id.* The IRS did not, however, require the arrangement to report the income and allocations. See *id.*

126. Today’s tax law preserves qualified tax partnerships. See I.R.C. § 761(a) (2006); Borden, et al., *supra* note 74 at 1182 (“Later IRS Rulings and court decisions, however, appear to interpret Section 761 as a codification of I.T. 3930 [citations omitted]. But see *Madison Gas & Elec.*, 633 F.2d at 515–16 (“The Section has generally been interpreted, in the absence of any legislative history, as approving the *Bentex* decision while providing relief from certain resulting hardships. [citations omitted] This interpretation is surely correct”); Martin J. McMahon, Jr., *The Availability and Effect of Election out of Partnership Status Under Section 761(a)*, 9 VA. TAX. REV. 1, 10 (1989) (“Most consider, however, that Congress enacted [section 761(a)] in reaction to the *Bentex Oil* decision [Section 761(a)(2)] “simultaneously confirms and ameliorates the result in *Bentex Oil*.”). Marvin K. Collie & Joseph P. Driscoll, *Partnership Oil and Gas Operations Under Provisions of the Internal Revenue Code of 1954*, 33 TEX. L. REV. 792, 794–95 (1955)

127. The IRS appeared to circumvent the established rule of law enumerated in statute and by the courts for administrative convenience in entity classification. The authority for the creation of qualified tax partnerships is questionable. See Gregg D. Polsky, *Can Treasury Overrule the Supreme Court?*, 84 B.U. L. REV. 185, 221–38 (2004) (arguing that Treasury acted beyond the scope of its authority in promulgating the check-the-box regulations, which conflict with prior case law (*Morrissey v. Commissioner*) and the statutory definition of tax corporation in section 7701(a)(2)).

IRS's rationale for its position.

Later the IRS used the joint-profit test to distinguish between co-owned joint-production arrangements, which lack joint-profit motive, and deeply integrated arrangements that have a joint-profit motive.¹²⁸ According to the IRS, an arrangement is a qualified tax partnership (i.e., exempt from partnership taxation) if it (1) is not a state-law corporation, (2) has sufficient business-like activity, and (3) does not have a joint-profit motive.¹²⁹ The activities to produce output will give a co-owned, joint-production, business-like activities. Therefore, assuming the arrangement is not a state-law corporation, the question becomes whether it has a joint-profit motive.¹³⁰

To rule that co-owned joint-production arrangements do not have a joint-profit motive, the IRS focused on whether the parties integrated the distribution function. The IRS ruled that arrangements that integrate both the production and distribution functions have a joint profit.¹³¹ Such arrangements vest the members with shared residual risk of both the production and distribution functions.¹³² An arrangement that integrates both the production and distribution function incurs costs to produce and distribute the product and receives revenue from sales, generating profit under the accounting definition. The full depth of integration supports a joint-profit motive conclusion, and the IRS ruled that deeply integrated

128. See, I.T. 3930, 1948-2 C.B. 126. In I.T. 3930, the IRS considered whether an oil and gas co-owned joint production arrangement was a tax corporation. First, the IRS distinguished the subject agreements from general partnerships “principally in that (1) they can arise only between joint operators, (2) they extend to and are terminated by exhaustion of the mineral deposit, (3) the majority in interest controls policies, and (4) the death of a participant or the transfer of his interest does not interrupt the relation – the heir or transferee becoming a participant.” *Id.* Second, the IRS stated that both a joint profit motive and the carrying on of a business indicate the existence of either a tax partnership or a tax corporation, but does not distinguish them from each other. *Id.* Third, the IRS stated that arrangements that have centralized management and continuity of interest are not tax partnerships. *Id.* Fourth, the IRS nonetheless disregarded centralized management and continuity of life and focused on joint-profit motive to rule that the arrangement was a tax partnership. *Id.* Because there was no joint profit, the IRS classified such arrangements as qualified tax partnerships. *Id.* This ruling is fascinating because it classified an arrangement with continuity of life and centralized management as a qualified tax partnership, after stating that those were the two defining characteristics of a tax corporation. *Id.* Arguably, the arrangement was a tax corporation under the laws in effect at the time. See *Morrissey v. Comm’r*, 296 U.S. 344 (1935) (applying the corporate-resemblance test later adopted in the Kintner regulations.).

129. I.T. 3930, 1948-2 C.B. 126. Later, the absence of a joint-profit motive became important to coownership-joint production arrangements wishing to elect out of Subchapter K under Section 761(a)(2). See *Treas. Reg. § 1.761-2(a)(3)* (as amended in 1994) (allowing members of co-owned joint-production arrangements to elect out of subchapter K if they own property as co-owners, reserve the right to take product in kind, and do not jointly sell the product).

130. The arrangement uses business-like activity to generate the product.

131. I.T. 3930, 1948-2 C.B. 126 (“[W]here the arrangements irrevocably vest the operator in his representative capacity with the authority to extract and sell the mineral, these are created for income tax purposes associations’ taxable as corporations, which associations are the owners of the depletable economic interests in the oil and gas in place and of the income derived from operations.”).

132. *Id.*

arrangements were tax partnerships.¹³³

The IRS distinguished deeply-integrated arrangements from arrangements with shallow integration and ruled that a joint-profit motive does not exist if parties integrate the production function, but not the distribution function.¹³⁴ An arrangement that integrates only the production function distributes its product in kind and does not have revenue cannot have profit under the accounting definition.¹³⁵ Relying upon the accounting definition, the IRS ruled that such arrangements lack joint profit and are therefore qualified tax partnerships.¹³⁶ Being bound by the statutory definition of tax partnership, the IRS used a procedural technique (exempting qualified tax partnerships from reporting) to in effect rule that co-owned joint-production arrangements are not tax partnerships. Because qualified tax partnerships are subject to partnership tax unless they elect otherwise, the IRS's fix is not perfect. Members of qualified tax partnership may remain subject to partnership taxation to reap its benefits, even though tax theory does not support that treatment.

The Tax Court and Seventh Circuit also found that a co-owned joint-production arrangement was a tax partnership, but arrived at that conclusion using the dictionary definition of profit. Recall that under the dictionary definition of profit, profits are the "benefit or advantages accruing from . . . the carrying on of any process of production"¹³⁷ Under the dictionary definition, economies of scale would fall within the definition of profit. The Tax Court articulated the argument that shared economies of scale create a joint profit. It stated that joint profit exists if "a group of business organizations decide to band together to produce with economies of scale a common product to be distributed to the members of the venture in kind."¹³⁸ The court held that a joint-profit motive existed "in the in kind distribution of electricity produced by the nuclear power plant."¹³⁹ The Seventh Circuit upheld that ruling.¹⁴⁰ Apparently, each party's reduced cost per unit of electricity was sufficient for the court to

133. *See id.*

134. I.T. 3930, 1948-2 C.B. 126 ("As such agreements commonly allow the participants to take their shares of the mineral in kind (or provide for the sale of share of the respective participants for their individual accounts under revocable agency powers), the sale of the mineral, even though made by the operator, is a sale by or on behalf of the individual participants. In such cases, there is no joint profit contemplated or realized by the associates [I]t is held that the participants, through the partnership thus created, individually own depletable economic interests in the oil and gas in place and must report the proceeds therefrom as their income.").

135. Recall that the accounting definition of profit is revenue minus expense. *See supra* note 113 and accompanying text.

136. *See, e.g.*, Rev. Rul. 68-344, 1968-1 C.B. 569 (relying on I.T. 3930, to rule that the joint ownership and operation of the arrangement was "substantially like the conduct of a business," but because there was no division of profits (the co-owners to the product in kind and distributed it individually) the arrangement was a qualified tax partnership eligible for the section 761(a)(2) election).

137. *See supra* note 119 and accompanying text.

138. *Madison Gas & Elec. Co. v. Comm'r*, 72 T.C. 521, 562 (1979).

139. *Id.* at 563.

140. *See Madison Gas & Elec. Co. v. Comm'r*, 633 F.2d 512, 515 (7th Cir. 1980).

find a joint-profit motive. Because the arrangement had no revenue, however, the courts had to rely upon the dictionary definition of profit to find a joint profit. The parties shared the economies of scale of the arrangement, which provided each party a benefit. They did not, however, share an accounting profit. Each party separately sold the electricity and separately received revenue. Thus, profit was separate, not joint, in an accounting sense.

A technical analysis suggests the courts rendered the wrong conclusion. The income tax system requires the computation of taxable income,¹⁴¹ which follows the accounting definition of income.¹⁴² Tax law requires partnerships to compute taxable income.¹⁴³ To compute taxable income, partnerships must determine their gross income and deductions.¹⁴⁴ The broad definition of gross income, which is similar to accounting's definition of revenue, requires a taxpayer to clearly realize an accession to wealth and have and complete dominion over it.¹⁴⁵ Thus, an arrangement must have a realization event to have gross income. Realization generally requires a disposition or change in ownership.¹⁴⁶ Consider three possible realization events for co-owned joint-production arrangements: (1) the production of the output, (2) the transfer of the output to the members, and (3) the delivery of output to end users. None of these are technically satisfactory. The first alternative violates the income tax system's realization principle. The arrangement never owns the electricity, so the member's taking it in kind is not a change of ownership. Production is not a realization event, otherwise all imputed income would be realized.¹⁴⁷

Even though the co-owners individually own the output, tax law could treat the arrangement as distributing the product to the members and treat that deemed distribution as a realization event. Under that scenario, the

141. See I.R.C. § 1 (a)-(e) (2006) (requiring individuals to pay tax on taxable income).

142. See I.R.C. § 63(a) (2006) (“[T]axable income’ means gross income minus deductions . . .”).

143. See I.R.C. § 703(a) (2006).

144. See I.R.C. § 63(a) (2006).

145. *Comm’r v. Glenshaw Glass Co.*, 348 U.S. 426 (1955).

146. See, e.g., Daniel N. Shaviro, *An Efficiency Analysis of Realization and Recognition Rules Under the Federal Income Tax*, 48 TAX L. REV. 1, 12 (1992) (“In the current tax system, however, realization generally means transfer in the sense of sale or exchange, (footnote omitted) as well as the receipt of proceeds, constituting earnings rather than a return of capital, from an ongoing investment such as a share of stock or bond.” (footnote omitted)); David A. Weisbach, *A Partial Mark-to-Market Tax System*, 53 TAX L. REV. 95, 96 (1999) (“Thus, current law generally does not require tax to be paid until income is ‘realized,’ which is generally when the asset producing the income is sold.” (footnote omitted)).

147. Some commentators have argued that gross income should include accretions, even without realization events. See, e.g., Timothy R. Hurley, “Robbing” the Rich to Give to the Poor: Abolishing Realization and Adopting Mark-to-Market Taxation, 25 T.M. COOLEY L. REV. 530 (2009); Mark L. Louie, *Realizing Appreciate Without Sale: Accrual Taxation of Capital Gains on Marketable Securities*, 34 STAN. L. REV. 857, 872 (April 1982) (proposing that unrealized gain on marketable securities of publicly traded companies should be subject to income tax). Nonetheless, the law requires a realization event in most situations. See *Eisner v. McComber*, 252 U.S. 189 (1920).

deemed distribution could be a disguised sale.¹⁴⁸ Partnerships and partners generally do not recognize gain on distributions from a partnership.¹⁴⁹ Thus, the arrangement would have no gross income if the transfer were a distribution. If the transfer were treated as a disguised sale, the transferee partner would have to pay or be deemed to pay for the output.¹⁵⁰ The members actually pay their shares of the production costs. Under a sale analysis, tax law could treat those payments as made for the output.¹⁵¹ If so, the deemed purchase price should equal the cost incurred to produce the output. That treatment would generate no taxable income for the arrangement, as the amount the arrangement received should equal the arrangement's cost to produce the property.¹⁵² If the arrangement's deemed gross income equals its expenses, it would not have any accounting profit. The deemed transfer treatment would have no effect on the member's cost of the property and their computations of income because their deemed purchase price would equal their actual cost of the product.¹⁵³ Thus, the deemed sale scenario would create complexity, not alter the computation of income, and undermine the courts' definition of joint profit.

Alternatively, tax law could treat the members as paying fair market value for the product acquired from the arrangement.¹⁵⁴ Under such treatment, the arrangement would recognize income equal to the difference between the deemed fair market payment and the costs to produce the electricity.¹⁵⁵ The first hurdle this method must overcome is determining fair market value of the output. Tax law would have to decide whether fair market value equals cost, the average sale price to the members, or some other amount. None of those alternatives intuitively make sense as an appropriate fair market value.

If the arrangement were able to establish a workable fair market value, after the deemed sale it would hold deemed cash, which would require attention.¹⁵⁶ The law would probably require a deemed cash

148. See I.R.C. § 707(a)(1)-(2) (2006).

149. I.R.C. § 731(a)(1) (2006) ("In the case of a distribution by a partnership to a partner . . . gain shall not be recognized . . ."). This is an exception to the general recognition rule in section 1001(c).

150. See I.R.C. § 707(a) (2006).

151. Payments made to a partnership within two years before or after a distribution from the partnership are presumed to be consideration for the property received. This presumption may, however, be overcome. Treas. Reg. § 1.707-3(c), -3(d) (as amended in 1992).

152. For example, if the cost of production was \$100,000 that would be the arrangement's income offset by an equal deduction. See I.R.C. §§ 1001(a) and (b) (2006); I.R.C. § 1012 (2006); I.R.C. § 1016 (2006).

153. The members deemed purchase price would equal the actual cost because the deemed transaction is a purchase for the amount contributed to cover costs.

154. This appears to be the position the Seventh Circuit would take in *Madison Gas & Elec. Co. v. Comm'r*, 633 F.2d 512, 516 (7th Cir 1980) ("The difference between the market value of MGE's share of that electricity and MGE's share of the costs of production obviously represents a profit.").

155. See Treas. Reg. § 1.61-3(a) (as amended in 1992).

156. Deemed transactions are not new to partnership taxation. For example, tax law creates deemed transfers to account for contributions of services in exchange for capital interests in a

distribution. The arrangement would allocate to each member its distributive share of gain recognized on the deemed sale of the output.¹⁵⁷ That allocation should ensure that members recognize no gain on the actual distribution of the output or distribution of deemed cash.¹⁵⁸ Accounting for a deemed sale of output to the members would add complexity to the rules. The net tax result of a deemed sale of the output to the members would not, however, significantly alter the result that would obtain if tax law disregarded the arrangement. Perhaps the deemed-sale approach would create nominal potential timing differences, largely negating the effect of added complexity.¹⁵⁹

The third alternative is to adopt the members' disposition of the product as the realization event. Treating the member's sale of the product as the arrangement's realization event will not reflect the members' economic arrangement and will add unnecessary complexity to the law. For various reasons the parties may keep the production function and distribution function separate. For example, the government may regulate the industry and restrict each member's distribution to a specific geographic region. Even in an unregulated industry, however, disparate markets may favor a separate distribution function.¹⁶⁰ Integrating the distribution function could cause diseconomies of scale and defeat the benefits of an integrated production function.¹⁶¹ Thus, treating the member's disposition of the output as the arrangement's disposition would not reflect the economic arrangement. If tax law included the distribution function in the integrated arrangement, the arrangement's taxable income would include the member's sales revenue and the costs the members incur to sell the product. Even though the parties do not share the benefits and burdens of distributing the electricity, tax law would treat them as sharing it. Because the parties did not intend to bear the cost or enjoy the economic benefit of each other's distribution efforts and results, the costs and results

partnership. See MCKEE, NELSON & WHITMIRE, *supra* 26 at ¶5.07-.08 (describing a deemed transfer of assets to a service partner and that partner's deemed re-contribution of the assets to the partnership).

157. See I.R.C. § 702(a) (2006).

158. Each partner's basis in the arrangement would equal the member's contribution plus gain allocated. I.R.C. § 705(a)(1) (2006). Thus, each member would have a \$100,000 basis in its interest in the arrangement. If the arrangement distributed the \$300,000 of deemed cash received on the deemed sale of the product to the members, each member would receive \$100,000 of deemed cash, recognize no gain, I.R.C. § 731(a) (2006), and reduce its basis in the arrangement to zero. I.R.C. § 705(a)(2) (2000).

159. If the arrangement were disregarded, the members would recognize gain on the sale of the product, equal to the difference between the cost and the amount received for the product. This will equal the sum of the gain allocated to the member on the disguised sale and the gain recognized on the subsequent disposition. Under the deemed sale method, the partnership would recognize gain when the product was transferred to the members. If the arrangement were disregarded, the members would recognize gain individually when they sold the product.

160. For example, one market may be largely urban or industrial, requiring specialized distribution skills while another market may be rural requiring different specialization.

161. See Spence, *supra* note 47 at 810 (“[I]ntegrating transmission and production is probably not efficient, and well-designed, independently managed transmission-service operators can probably provide network management services more efficiently than a vertically integrated firm can.”).

of such efforts should not be part of the integrated arrangement.¹⁶²

One final technical point: economic theory suggests that tax law should recognize arrangements as separate from their members only if they need the partnership tax accounting and reporting rules.¹⁶³ The Seventh Circuit holds that co-owned joint-production arrangements are tax partnerships because they have a joint-profit motive, as evidenced by the shared economies of scale.¹⁶⁴ Ironically, however, co-owned joint-production arrangements should be able to elect to be qualified tax partnerships and avoid the partnership tax accounting and reporting rules.¹⁶⁵ If the arrangement truly had a joint profit, it would need the partnership tax accounting and reporting rules to determine each member's share of the arrangement's income. The court's suggestion is an implicit concession that the parties can compute taxable income without the partnership tax rules. If they do not need the partnership tax rules, they should not be tax partnerships.

The IRS and courts have distinguished between arrangements that integrate a portion of the production process and those that integrate the entire process. They believe that all such integrated arrangements are tax partnerships but allow shallowly-integrated arrangements to elect to be qualified tax partnerships. According to the Tax Court and seventh Circuit, both types of arrangements satisfy the joint-profit motive test. Co-owned joint-production arrangements satisfy it only because they share economies of scale. That treatment creates undue technical complexity. It also violates the economic theory of partnership taxation.

C. Economic Analysis of Shared Economies of Scale

Production arrangements as tax partnerships create technical complexity, which indicates a flaw in the courts' definition of tax partnership. The benefit that arises from shared economies of scale is a red herring, which distracted the courts. Parties to co-owned joint-production arrangements benefit from shared economies of scale, but general principles of income tax can handle all aspects of such arrangements' economic performance. The members of those arrangements contribute cash in proportion to their ownership interests to cover the arrangement's costs, and they take the output in proportion to their ownership interests.

162. *Madison Gas & Elec. Co. v. Comm'r*, 633 F.2d 512, 513–14 (7th Cir. 1980) (“Electricity produced by the Plant is distributed to each of the utilities in proportion to their ownership interests. Each utility sells or uses its share of the power as it does power produced by its own individually owned facilities, and the profits thereby earned by MGE contribute only to MGE's individual profits. No portion of the power generated at the Plant is offered for sale by the utilities collectively, and the Plant is not recognized by the relevant regulatory bodies as a separate utility licensed to sell electricity.”).

163. See Bradley T. Borden, *Profits-Only Partnership Interests*, 74 *BROOK. L. REV.* ____ (forthcoming 2009).

164. See *Madison Gas & Elec. Co. v. Comm'r*, 633 F.2d at 515, 16 (upholding the Tax Court's ruling).

165. See I.R.C. § 761(a)(2) (2006).

Consequently, each member can trace its costs directly from its ownership interests. Each member can also trace the output received from the arrangement directly from the ownership interest. They can separately trace revenue from the sale of the output, the cost of which would include the amount they individually contributed to cover the costs. The benefit derived from sharing economies of scale does not alter that ability.

The discussion of the economic theory of partnership tax concluded that if two parties integrate property and services, the arrangement should be a tax partnership because the parties cannot trace economic items from the contributed resources.¹⁶⁶ When integration is broad and deep, both property and services contribute to the arrangement's output. The parties cannot determine the extent to which each resource contributes to the arrangement's income. As the parties adjust the depth of integration, however, the inability to trace may diminish. Consider the application of tracing to co-owned joint-production arrangements. The members agree to share the arrangement's costs and output in proportion to their respective ownership interests. The parties cannot trace each dollar of input to a unit of output, but such precision tracing is unnecessary. Every unit of output derives from input in proportion to the owners' contributions. Thus, even though the output allocated to one member derives in part from the input of another member, the distributee member's input exactly offsets the other member's input. If the output is fungible, the economic net result is that each member's output derives only from the members input, and tracing is possible.

An example illustrates how tracing is possible in co-owned joint-production arrangements, even though the parties integrate resources. Assume Alvin, Simon, and Theodore equally co-own a nut farm. Each contributes an equal amount to cover the costs of the farm, and they share the output equally. Assume the farm produces 3,000 bushels of nuts. Each of the three members could have an undivided one-third interest in each nut, but the nuts are fungible. Instead of selling the nuts together, the parties decide to divide them equally, and each person takes 1,000 bushels of nuts. Perhaps the transaction should be cast as each party swapping a one-third interest in each nut in 2,000 of the bushels in exchange for a two-thirds interest in 1,000 of the bushels. That swap does not change the parties' economic situation, so tax law should disregard it.¹⁶⁷ To tax the deemed swap of undivided interests, tax law would have to determine the nuts' fair market value, which would raise all of the problems discussed above.¹⁶⁸ Instead, tax law should treat each party as paying the one-third

166. See *supra* Part II.B.

167. See Treas. Reg. § 1.1001-1(a) (as amended in 2007) (providing that taxpayers recognize gain or loss on the conversion of property into cash, or from an exchange of property for other property differing materially either in kind or in extent). The exchange of a one-third undivided interest in several units of a fungible product for a two-thirds interest in other units of the fungible product does not appear to be an exchange of property for other property differing materially in kind or in extent.

168. See *supra* text accompanying notes 142165.

cost to produce the output he takes.

Merely taking output in kind does not distinguish co-owned joint-production arrangements from other production-oriented integrated arrangements. The theory of partnership tax suggests that the parties must contribute similar resources, take fungible goods, and share the costs of the same parts of the production process for the arrangement to be disregarded. If one member were to contribute property and another were to contribute services to a co-owned joint-production arrangement, the nature of the arrangement would require partnership tax accounting and reporting.¹⁶⁹ Instead of the parties swapping identical input for identical output, they would swap property for services. Thus, if Service Co contributed services and Land Co contributed property to a co-owned joint-production arrangement, Land Co would in effect transfer a portion of property to Service Co in exchange for services. They would each then contribute the resources to the arrangement. Furthermore, the parties could not determine the portion of each unit of output derived respectively from the property and services. The disparate contributions make tracing impossible. Thus, the arrangement should be classified as a tax partnership.

If the output is not fungible, the members would take different products, and the classification exception should not apply. Consider, for example, an arrangement that produces two products: oil and gas. Oil Co and Gas Co own the arrangement. They contribute equally to the cost of the arrangement, but Oil Co takes all the oil the arrangement produces and Gas Co takes all the gas. Unlike swapping interests in fungible output, swapping interests in different products does change the parties' economic position. If the arrangement produced equal quantities of oil and gas, Oil Co would transfer its one-half interest in the gas for Gas Co's one-half interest in the oil. The parties cannot trace the outputs they take directly from their contributions. The arrangement should be a tax partnership.

An integrated production function requires parties to share the residual risk of a single process. Thus, if one party holds the residual risk of one function and another party the residual risk of another function, they would not come within the exception for co-owned joint-production arrangements even if they shared the output of the two functions equally. For example, assume Claire owns an iron mine and Alexi owns a steel mill. They agree that Claire will provide iron ore to Alexi and Alexi will process it into steel. They agree to share the arrangement's output equally. Assume the arrangement allows them to share the economies of scale of each other's specialized skills and produce more output at a lower cost than either could obtain performing the entire production process alone. The parties have not integrated resources, but they cannot trace their respective shares of output directly from their contributed resources. The parties have effectively swapped resources. Partnership tax would not govern such

169. In such a situation, the members would not be able to trace income from its source. See *supra* Part II.B.

arrangement, but the parties should be taxed on the exchange of resources.

Economic analysis provides new insight into the classification of business arrangements. Although unincorporated arrangements that integrate property and services generally are tax partnerships that rule should not apply if (1) the parties only integrate the production function, (2) contribute similar resources, and (3) take a fungible output in kind. If the parties do not integrate the distribution function of fungible output, they do not create the accounting and reporting difficulties that typically arise with integrated arrangements. In fact, treating arrangements that only integrate the production function as tax partnerships creates accounting and reporting complexity because the arrangements have to compute taxable income even though they have no gross income. To the extent joint-profit motive is an element of the definition of tax partnership, it should not include sharing the benefit of reduced per-unit costs obtained through shared economies of scale in co-owned joint-production arrangements.

If tax law adopts shared economies of scale as a test for tax partnerships classification, it not only adds complexity and violates tax theory, it also creates a slippery slope. The situations that lend themselves to sharing economies of scale are numerous. They arise in business and non-business settings. If tax law treats shared economies of scale, non-business arrangements and non-integrated arrangements may fall within the definition of tax partnership. Such a large net would wreak havoc on the tax system.

IV. OUTPUT-ORIENTED ECONOMIES OF SCALE

Members of arrangements may share rights in resources to varying degrees without integrating their resources. For example, a creditor shares the rights of cash with a borrower. The borrower has access to that cash for a period of time, restricting the creditor's right to it. The creditor decides what to do with the cash following the termination of the loan. Because the creditor decides how to use those rights not contracted away, the creditor holds the residual risk of the cash.¹⁷⁰ Tax law has the challenge of determining whether the transfer of rights in a resource reaches a point at which the transferee has a share of the resource's residual risk. If tax law focuses solely on whether parties share economies of scale, it will often miss that mark.

Economic theory suggests that parties integrate resources to reduce appropriable specialized quasi-rents.¹⁷¹ Parties only integrate resources, however, if the appropriable specialized quasi-rents exceed the cost of integration.¹⁷² One potential cost of integration is diseconomies of scale

170. See *supra* note 11.

171. See *supra* note 63.

172. See *id.*

caused by loss of specialization.¹⁷³ Some parties stand to gain by sharing the economies of scale through non-integrated arrangements. Tax law should not classify such arrangements as tax partnerships. Instead, it should focus on whether parties integrate their resources in such a manner that tracing becomes impossible.

A. Non-integrated Scale-Sharing Arrangements

If parties decide not to integrate resources, they may have to use other techniques to minimize agency costs and align interests. Profit-sharing and granting access to resources are two techniques that may help reduce agency costs and maximize shared economies of scale. Because the definition of partnership includes joint profit, the existence of profit sharing and shared economies of scale may cause some arrangements to look like tax partnerships.¹⁷⁴ Nonetheless, parties must integrate the appropriate resources to be tax partnerships. The following discussion illustrates that focusing on shared economies of scale would unduly expand the definition of tax partnership.

Recent economic scholarship contends that parties may achieve greater economic benefits by granting access to resources instead of integrating.¹⁷⁵ Common arrangements illustrate the benefits of non-integration and access-granting. Assume that Marcy owns a semi truck and trailer. She maintains and drives the truck and communicates with a dispatcher to coordinate pickups and drop-offs. By dividing her time between maintenance, driving, and dispatching, she is not able to coordinate drop-offs and pickups in an efficient manner and often misses jobs that are convenient to each other. Therefore, she only has 3000 loaded miles per month (the output from her resources). That output must cover the cost of operating the truck and a portion of the truck's cost. Marcy also quickly performs the maintenance function but spends all her maintenance time working on the truck, so she does not keep up with technological advances. Consequently, she cannot maintain her truck in optimal working condition, and the cost of running the truck increases. Because Marcy does not maximize her hauling efficiently and does not keep her truck in peak performance, her costs per loaded mile is fairly high.

Marcy's efforts to perform every task required to operate her trucking business prevents her from developing expert skills for any of the required functions. Marcy could decrease her cost per loaded mile by developing expert skills in one or more of the necessary functions and hiring experts to perform other functions. For example, Marcy may stop driving and maintaining the truck and instead focus on coordinating drop-

173. See *supra* note Rajan & Zingales, *supra* note 9 at 407; Spence, *supra* note 47 at 810.

174. See *supra* Part III.B. (discussing how the IRS and courts have applied the joint-profit-motive test).

175. See Rajan & Zingales, *supra* note 9 at 406-13.

offs and pickups and handle other administrative tasks related to owning the truck.¹⁷⁶ This would allow her to more efficiently coordinate the truck's routes and loads and reduce the truck's empty miles.¹⁷⁷ Coordinating loads requires a certain amount of time and cost to master. Marcy could reduce the cost of dispatch per loaded mile if the truck does more loaded miles and fewer empty miles.¹⁷⁸ By focusing more time on coordinating loads, Marcy could reduce the cost of dispatch per loaded mile by increasing the number of loaded miles and decreasing the number of empty miles. That would help decrease her cost per loaded mile. Thus, if Marcy is able to transfer some of the services to another party, she could increase the economies of scale of her truck and the services she performs.

Marcy would not transfer the maintenance function to another party unless doing so would reduce her costs increase her output, or do both. The time Marcy saves by not doing maintenance should allow her to develop and apply other expert skills, which should help reduce average costs per unit of output. She may reduce the average cost per unit of output by obtaining better maintenance services from someone else. If an expert mechanic can improve the truck's mechanical efficiency, the truck will have less down time and should operate at a lower cost. For example, better maintenance could improve the truck's fuel efficiency, lowering the fuel cost per loaded mile. Thus, transferring the service function to another person could help Marcy.

By transferring the maintenance function to another party, Marcy can benefit from the other party's economies of scale. For instance, Marcy might consider transferring the maintenance services to Ahmed. The maintenance function requires Ahmed to be familiar with many different mechanical operations. Ahmed should know how to service the various parts of the diesel engine, the transmission, electrical, and other parts of the truck. Learning to maintain the various parts of the truck will cost Ahmed time and money. He will wish to develop economies of scale for each operation. He can do that by providing a specific service for several different trucks. For example, if Ahmed incurs \$3,000 to learn how to service a transmission, he can reduce the cost training per transmission service by applying his skills to more transmissions. Assuming a truck needs transmission service every three years, Ahmed's cost per service will be relatively high, if he only services one truck. Ahmed can reduce that cost per service by servicing multiple trucks. Ahmed obtains economies of scale by servicing more trucks. He can pass some of his cost savings on to his customers, like Marcy. Thus, Marcy would share the economies of

176. For example, she may have to obtaining licensing in different jurisdictions in which she operates and assist the drivers in maintaining their specialty licenses and scheduling their driving.

177. Unloaded miles would decrease if Marcy were to better coordinate pick-ups to be closer in time and space to drop-offs.

178. For example, Marcy must pay to cost to travel from a drop-off to a pick-up, but she only gets paid for loaded miles. Traveling empty increases her costs, and may decrease her output because the truck could otherwise be traveling with a load.

scale that Ahmed creates by servicing multiple trucks. In turn, Ahmed shares the economies of scale that Marcy obtains by transferring the maintenance function to him. That sharing of economies of scale will affect the parties' decision to integrate the arrangement.

Marcy could hire Ahmed to provide the services. Marcy's hiring Ahmed would not create an integrated arrangement, as both parties would retain the residual risk in their respective resources. Not integrating poses some costs. Because Ahmed does not have an interest in the truck, he may be inclined to shirk his responsibility or to exploit appropriable specialized quasi-rents that may arise.¹⁷⁹ To some extent market factors, such as reputation, will help reduce Ahmed's shirking and quasi-rent-seeking behavior, but not integrating does create costs.¹⁸⁰ If integrating the mechanical function and truck ownership is less costly than nonintegration, Marcy and Ahmed should integrate their resources. Marcy and Ahmed could integrate by reciprocally transferring portions of the residual risk in the truck and the services. Once Ahmed takes an ownership interest in the truck, he benefits from the truck's efficient operation, so he may be less inclined to shirk. The integration of Ahmed's services and the ownership of the truck may have negative long-term consequences.¹⁸¹ The potential loss of shared economies of scale could be a cost of integrating resources.

Integration gives Marcy an interest in Ahmed's services. She should be able to control, to some extent, the work that Ahmed does. For example, servicing Marcy's truck may require no more than ten percent of Ahmed's time. The timing of such needs may, however, be unpredictable.¹⁸² Nonetheless, Marcy, as a residual claimant of Ahmed's services, may insist upon Ahmed being available whenever the truck needs servicing. At other times, Ahmed may use his time to assist other truck owners. Marcy's demands could pull Ahmed away from other customers and cause him to lose some business. After integration, Ahmed would share income from providing services to others with Marcy. Ahmed would therefore appear to benefit more from servicing the truck co-owned with Marcy, and neglecting other work. Such behavior could be costly. As the sole bearer of the residual risk of his services, Ahmed would be inclined to maintain professional competency and develop expertise that provided him

179. For example, Ahmed may shirk by not obtaining the latest training available or by quickly completing a task without the care needed to ensure the truck runs at top performance. He could also recommend parts that are not the best or of the most appropriate quality or recommend work that is not needed. Ahmed may exploit specialized quasi-rents by seeking higher than normal rates if he knows that a delay in repair would cost Marcy and job and potential profit. See Klein, Crawford & Alchian, *supra* note 62 at 298–99. If Marcy is unable to find another mechanic with the needed skills, she would have no choice but to pay Ahmed the extra fee or risk losing the job and profit. As long as Ahmed's increased fee does not exceed the profit Marcy will make if the truck is repaired quickly, she would most likely pay the additional fee.

180. See *id.* at 303–04.

181. See Rajan & Zingales, *supra* note 9 at 406–13.

182. For example, Marcy may be able to generally predict when the truck will require routine maintenance, but not when it will require repairs.

a competitive edge in the market place.¹⁸³ Working for other truck owners would help him maintain and further develop his expertise. As he works less for other truck owners, his skills will atrophy and the work he does on the co-owned truck would be inferior to the work he would do as sole holder of the residual risk of his services.¹⁸⁴ Integration may therefore create diseconomies of scale in this simple arrangement.

In such situations, Marcy may consider other alternatives that might help motivate Ahmed to provide the services she seeks, without having to pay a premium to him if market forces change. If Ahmed decides to delay work on her truck to exploit a specialized quasi-rent, Marcy may have to pay him more than usual to convince him to work on her truck. If the revenue she would lose due to delay exceeds the additional cost of the services she seeks, Marcy would likely pay the additional costs. Marcy must consider the risk of not earning additional profit when considering whether to increase the compensation paid to Ahmed. Even if Ahmed completes the service on time, other factors may prevent Marcy from completing work that she intends to do. For example, weather could stall her travel and prevent her from picking up or dropping of a load in time to earn potential revenue. To spread that risk and provide Ahmed the opportunity to collect additional fees for his services, Marcy and Ahmed could agree to share in the potential profit. If properly structured, that would provide incentive for Ahmed to do the work quickly, reduce Marcy's risk of loss, and provide Ahmed a share of potential extra income.

If Marcy quits driving, she will need someone else to provide that service. Assume Diego agrees to drive the truck, and Marcy and Diego have several options in considering how to compensate Diego for his services. Marcy could (1) pay Diego a fixed salary, (2) pay him based on loaded miles driven, (3) pay him a percentage of the profits, or (4) grant him an interest in the truck in exchange for an interest in his services. The issues in this arrangement are different from the issues in the Marcy-Ahmed arrangement. As a mechanic for hire, Ahmed provides services to various customers and develops and improves his skills in that manner. As a driver, Diego would likely only drive for Marcy, assuming she has sufficient work to keep him busy or sufficient resources to pay for his full-time services. Under a fixed-compensation structure, Diego may have a tendency to shirk. Shirking may include not driving the full amount of time allowed under law or driving in such a way to damage the truck. If paid a fixed amount, Diego will share the loss from driving slower or damaging the truck. Diego's exposure to the risk of business failure would be limited to his losing his job. If the business was less profitable than its full capacity, Diego would not bear the cost of such diminished profitability and he would not gain from the business being more profitable.

183. *See id.*

184. *See id.* at 405 (recognizing that ownership may breed complacency).

If the structure pays Diego based on loaded miles, he may cut corners to deliver more units and increase Marcy's long-term costs. Cutting corners could also have short-term effects, such as increased fuel consumption, more regulatory violations that increase the costs of licensing the truck, and damaged goods. The per-unit payment structure does not take such costs into account in paying Diego. Thus, a per-unit payment structure may encourage Diego to do things that harm Marcy's economic interest. Marcy could solve that by granting Diego an interest in the profits the truck earns while Diego drives. Because profits include a share of expenses, Diego would help ensure that costs are minimized, at least in the short term. If Diego does not plan to drive Marcy's truck long term, he might strive to maximize short-term profitability at the expense of Marcy's long-term profitability.

Marcy may consider granting Diego an ownership interest in truck to help align his long-term interests with her own. Granting Diego an ownership interest in the truck has economic costs. A co-ownership arrangement may in fact reduce the arrangement's economies of scale. As a co-owner, Diego may insist upon being more active in decisions regarding scheduling loads and maintenance. That may distract him from his driving activities and decrease his efficiencies. Marcy and Diego may have differences of opinion regarding scheduling, which could slow the decision-making process and increase costs. Thus, integrating resources may diminish the shared economies of scale the parties would realize in a non-integrated structure.

B. Distinguishing Integrated from Nonintegrated Arrangements

Economic theory suggests that business participants may share economies of scale through non-integrated arrangements. Often, tax law's challenge is to distinguish between nonintegrated and integrated arrangements. The holder of residual risk in a resource can exclude others from accessing the resource by granting access in varying degrees. By granting access, the holder of residual risk may transfer ownership of the rights included in the owner's bundle of rights. Thus, the holder of residual risk may allow another party to access certain parts of the resource for limited periods of time without transferring residual risk.

That access has potential value to both parties. The party accessing the resource may have an opportunity to develop a specialized skill and benefit from an increased market value for that skill. The party who owns the resource receives the benefit of the services performed by the party accessing the resource. Access is a transfer of rights in the resource, but is not a transfer of residual risk. Therefore, access-granting is not integration. Tax law must distinguish between access-granting and transfers of residual risk. It can do that by focusing on what the parties would have if the arrangement terminated. The party controlling the resource upon termination of the arrangement holds the residual risk of the resource.

Integration is the reciprocal transfer of the residual risk of resources.¹⁸⁵ Two parties may share the residual risk of a single piece of property without raising issues that require partnership tax accounting and reporting rules.¹⁸⁶ For example, Marcy and Ahmed could share the residual risk of the truck but not Ahmed's services, they would be in the same situation as other co-owners of property, even if they hired Ahmed to service the truck and paid him market value for his services.¹⁸⁷ The parties could trace their income from the property to their interests in the property. The non-integration therefore does not require separate accounting rules. For integration to occur between Marcy and Ahmed, Marcy and Ahmed must share in the residual risk of both the truck and the services.¹⁸⁸ Tax law must determine how to identify such arrangements.

In border line cases, there may be a temptation to allow the parties to elect their classification. Such a method would bear some similarities to the current corporate classification method, but only allow elective treatment if the question was not obvious.¹⁸⁹ The IRS has illustrated one potential method for addressing the classification of difficult-to-classify arrangements.¹⁹⁰ The proper classification of arrangements to share the proceeds of coin-operated amusements can be difficult.¹⁹¹ In a typical arrangement, one party owns the coin-operated amusements ("machine owner") and enters into an agreement to place the machines on property owned by some other party ("premises owner").¹⁹² The agreement provides that the machine owner will pay the costs of installing and repairing the machines and all other expenses with respect to the machines.¹⁹³ The machine owner will also bear any of the losses from operations of the machines.¹⁹⁴ The premises owner makes space available and purchases the tax stamps for the machines and receives reimbursement for the cost of the stamps from the machine owner.¹⁹⁵ The machine owner opens the

185. See *supra* text accompanying note 11.

186. See *supra* Part II.C.

187. See Borden, *supra* note 163.

188. Professors Grossman and Hart recognized that parties do not integrate even though they may determine compensation on a piecemeal or other basis. See Grossman & Hart, *supra* note 11 at 694–95.

189. The current corporate classification system allows any noncorporate arrangement to elect to be a corporation. See Treas. Reg. § 301.7701-3 (as amended in 2006). Generally parties may choose their legal form of entity, so the choice of being a tax corporation is largely discretionary. That choice would therefore differ from a proposal that would allow parties to choose between being a tax partnership or disregarded arrangement if they had not obviously integrated resources. The elective treatment has been subject to increased criticism over the years.

190. See Rev. Rul. 92-49, 1992-1 C.B. 433.

191. "Coin-operated amusements include video games, pinball machines, jukeboxes, pool tables, slot machines, and other machines and gaming devices that are operated by coins or tokens inserted into the machines by individual users." Rev. Rul. 92-49, 1992-1 C.B. 433.

192. See Rev. Rul. 57-7, 1957-1 C.B. 435.

193. See *id.*

194. See *id.*

195. See *id.*

machines in the presence of the premises owner, reimburses the premises owner for any payouts and then divides the balance as agreed.¹⁹⁶

The proper classification of the coin-operated-amusements arrangement arose on three different occasions. First, the IRS classified the arrangements as leases, i.e., non-integrated arrangements.¹⁹⁷ Under such classification, the premises owner's share of the machines' revenue would be rental income. The machine owner should include the total revenue in gross income and take a rental deduction for amounts paid to the premises owner. Second, a federal district court considered the issue and held that the arrangements can be tax partnerships, i.e., integrated arrangements.¹⁹⁸ Third, the IRS stated it that would continue to take the position that the arrangements are leases.¹⁹⁹ It will not, however, impose penalties regardless of the position the taxpayer takes with respect to such an arrangement, if the taxpayer takes the position in good faith.²⁰⁰ Thus, the IRS has effectively made the classification of such arrangements elective.

The example of arrangements involving coin-operated amusements illustrates the difficulty of drawing the line between integrated and non-integrated arrangements. The example also provides one method for addressing such arrangements. Instead of deepening the analysis, the IRS punts and allows the parties to generally determine the classification. Eliminating the potential for penalties grants the participants the treatment they desire. At worst, the participants will be required to pay the tax with interest, which would put them in the position they would have been in had they not taken the contrary position. With no guidance regarding classification, the parties may be able to exploit the law's deficiency and obtain the benefits of a particular classification. Thus, the elective regime is unjustified.

The IRS and courts have difficulty classifying arrangements involving coin-operated amusements because the definition of tax partnership is ambiguous, and the arrangements have qualities of both tax partnerships and disregarded arrangements.²⁰¹ The IRS and courts instead focused on integration and the tax purposes of partnership taxation, they might be able to classify the arrangement. The parties appear to share economies of scale by capitalizing unused space in the premises owners' property and the skills of the machine owner. By asking who holds the residual risk in the amusements, space on which the amusements sit, and the services required to operate the amusements, the courts and IRS could determine whether the arrangements are integrated and should be classified as tax partnerships.

196. *See id.*

197. *See* Rev. Rul. 57-7, 1957-1 C.B. 435.

198. *See* *Manchester Music Company, Inc. v. United States*, 733 F.Supp. 473, 484 (D. N.H. 1990).

199. *See* Rev. Rul. 92-49, 1992-1 C.B. 433.

200. *See id.*

201. *See supra* notes 104–112 and accompanying text (criticizing the definition of tax partnership).

In establishing rules for classifying scale-sharing arrangements, tax law should consider the purpose for the tax rules. Tax law should disregard nonintegrated arrangements because they can trace income from its source to owner of that source.²⁰² If parties do not integrate resources, the general principles of income tax should apply. A service provider will hold residual risk in the services and any income the service provider receives from the arrangement must be from services. A property owner holds the property's residual risk. Any income the property owner receives must be income from the property. That result is correct, even though members to nonintegrated arrangement benefit from the coordinated use of resources.

The example above illustrates that if Marcy, as truck owner, drove, maintained, and dispatched the truck, none of her resources (the truck and Marcy's services) would reach optimum efficient performance. Measuring the truck's output in loaded miles, she increased economies of scale specializes and transferring the maintenance function to Ahmed, who also specialized. The parties decided that integrating would reduce economies of scale, so they did not integrate. Nonetheless, they shared economies of scale. The access each party had to the other's resource allowed them to share economies of scale. Tax law should not, however, recognize the arrangement as an entity separate from its members simply because the parties share economies of scale.

The members of the arrangement should recognize income based upon the resources they hold, even though they each benefit from the other parties' resources and the economies of scale derived from specialization and resource coordination. The parties cannot determine the extent to which each resource, contributes to the arrangement's output, but their arm's-length agreements help determine each person's share of the output. Because the owners do not share the residual risk of any resource, they can each determine the source of their respective shares of output.

This analysis helps explain the relevance of co-ownership or shared residual risk to the classification of business arrangements. If parties co-own resources, they have income from all of those resources, but they cannot trace the specific resources from which the income flows. Alternatively, when parties do not share the residual risk of resources, income each party receives is income from the resource the party owns. Even though resource owners may benefit from access to other resources, any increased output derived from that access still flows from the resource to the extent agreed to by the parties.

C. Avoiding a Slippery Slope

If tax law simply focuses on whether parties share economies of scale, it creates a slippery slope that will cause classification to descend into an unworkable model. Tax law should classify business arrangements that

202. See *supra* Part II.A.

have revenue and consequently require special tax accounting and reporting rules. A focus on scale sharing may extend the classification rules to arrangements that would not otherwise be considered to have a profit motive to be tax partnerships. The unintended consequences of such outcome may surprise many.

A case in point is roommates. Roommates obtain economies of scale by sharing the cost of an apartment. If two people share the cost of one space, the cost per occupant decreases, creating economies of scale. Under the Seventh Circuit's interpretation of joint-profit motive, the roommates may share a profit because they both obtain a benefit from the arrangement. Classifying them as tax partners simply because they share an apartment would be absurd.

Unless roommates jointly engage in a business venture, they would not share any revenue. They would therefore face a serious challenge if the law required them to file a partnership tax return. The difficulty may be greater than that faced by members of co-owned joint-production arrangements.²⁰³ Tax law should generally disregard roommate arrangements. If it focuses on shared economies of scale, however, it may be forced to classify such arrangements as tax partnerships. That potential outcome is further indication the shared economies of scale should not be a part of the tax partnership classification regime.

V. CONCLUSION

Tax and economic theory suggest that business arrangements should be tax partnerships only if parties integrate resources and cannot trace income from a resource to the person who contributes the resource. Neglecting economic and tax theories and technical aspects of the law when drafting judicial decisions can produce bad results in tax law. Tax law must always keep in mind the purpose for various rules. The purpose for classifying arrangements as tax partnerships is to facilitate the administration of tax laws. Only arrangements requiring partnership tax accounting and reporting rules should be tax partnerships.

Unfortunately, the Tax Court and Seventh Circuit lost sight of the purpose of partnership taxation when it relied upon shared economies of scale to classify co-owned joint-production arrangements as tax partnerships. That classification creates complexity without improving the system. It also creates a slippery slope. The use of shared economies of scale to classify arrangements may bring within the definition of tax partnership arrangements that should not be subject to partnership taxation. Thus, shared economies of scale should not factor into tax partnership classification. Instead, the law should rely upon tax theory to classify business arrangements.

203. See *supra* text accompanying notes 141–165.