Unitary Formulary Apportionment as a Solution to the Conundrum of Source

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Introduction

Fundamental weaknesses with the concept of corporate residence coupled with fierce tax competition in this era of globalization herald the inexorable demise of the residence-based corporate income tax. The United States (U.S.) stands increasingly alone in trying to tax resident multinational companies on their worldwide business income, as the rest of the world moves towards residence-neutral source-based taxation for multinational corporations.¹ The Achilles’ heel of a territorial system, however, is the conundrum of source²: the vulnerability of current transfer pricing law to income shifting is the single most pressing argument against the adoption of a territorial tax system by the U.S.³

This paper advocates for the replacement of current failed transfer pricing law with a unitary formulary apportionment ("F.A.") regime. F.A. has clear advantages over S.A. and the problems with F.A. do not seem any greater than what exists under the status quo. Admittedly, there are theoretical and implementation difficulties surrounding the design and adoption of a F.A. system; looking at the empirical data, however, most of these obstacles seem more theoretical than real. In addition, given the superiority of a harmonized apportioning rule, it is proposed that the appropriate formula to adopt may not actually be the one that is most economically efficient, but rather the formula that is simply the most politically feasible.

Our discussion will be divided into four main parts. Part I summarizes the main problems resulting from the current arm’s length, separate accounting system, and identifies the main reason for these problems. Part II makes the case for formulary apportionment. Part III then delves into the design of a formulary taxation regime. Part IV ends off by discussing the way forward for achieving a universal formulary taxation regime.
I. The Current Arm’s Length, Separate Accounting System

(a) Problems Resulting from the Arm’s Length, S.A. System

The main problems with the U.S. international tax regime which result from the current arm’s length, S.A. system are: (1) unnecessary complexity, (2) high compliance costs, (3) low revenue generation, (4) great uncertainty, and (5) incentivizing income shifting.

(1) Unnecessary Complexity

The current U.S. international tax system is absurdly complex, due in no small part to current transfer pricing rules. Complexity is, of course, not a weakness *per se* if it is warranted; the problem here is that much of the complexity engendered by the current transfer pricing system is unnecessary. For example, the vulnerability of current transfer pricing rules to income shifting based on intangibles ownership and risk-bearing necessitates a number of additional complexities in the international tax system, such as many (if not all) of the “base company” provisions of subpart F and the foreign tax credit rules on indirect credits. The current transfer pricing system can thus be seen as “the tail that wags the dog of much unnecessary tax complexity”.

(2) High Compliance and Enforcement Costs

One unfortunate consequence of the mind-boggling intricacy of the current transfer pricing system is its disproportionate consumption of both I.R.S. and private sector resources. Taxpayers spend astonishing sums each year on compliance efforts under the current S.A. system: for example, a study in 2004 estimated the compliance cost of the current U.S. system for the taxation of foreign-source income to be about 40% of the total tax-compliance cost of large U.S. corporations – this figure is disproportionately higher than the aggregate share of assets, sales, and employment that is abroad. As a recent Ernst & Young survey points out,
“[a]mong non-US owned organizations, by far the single most significant concern is with transfer pricing and its documentation.”

The requirement for “contemporaneous documentation” as well as the complexity of new S.A. methods have led major accounting firms to develop huge databases and expertise in preparing transfer pricing documentation for clients, imposing huge costs on multinational corporations whilst leaving small and medium businesses – which cannot afford the major accounting firms – to fend for themselves. The government as well expends much institutional resources on enforcing those same rules, through attempts at comprehensive examinations of taxpayer documentation involving the most experienced and skilful of Internal Revenue Service (“I.R.S.”) personnel. Unsurprisingly, audit costs for federal transfer pricing cases cost three to seven times more than that for state F.A. audits.

(3) **Low revenue generation**

Despite the expense of compliance and enforcement, the current transfer pricing system raises relatively little revenue for the U.S. compared to other O.E.C.D. countries. This result is surprising, given that U.S. corporate statutory tax rates are in fact higher than those of other O.E.C.D. countries. From 1982 to 2005, the revenues of most O.E.C.D. countries increased as a share of G.D.P. even though corporate tax rates declined; by the end of the sample, O.E.C.D. countries on average received about 3.25% of G.D.P. from corporate tax revenues. In sharp contrast, the U.S., which has corporate tax rates one standard deviation higher than the average O.E.C.D. tax rate, only generated revenues of about 2.25% of G.D.P. at the end of the sample. The current transfer pricing system generates high compliance costs with low revenues to show for it, and is the epitome of a ‘bad tax’.
(4) **Great Uncertainty**

Additionally, despite the high costs of complying with the current transfer pricing rules, taxpayers and the I.R.S. routinely end up with dramatically dissimilar determinations of arm’s length pricings. Transfer pricing controversies typically involve hundreds of millions of dollars in proposed deficiencies, result in judicial opinions that run to hundreds of pages each and are resolved at amounts that resemble neither the government’s nor taxpayer’s positions.\(^{15}\) The 1994 regulations under section 482 of the Internal Revenue Code do not seem to have abated this trend.\(^{16}\) This unpredictable application of the current transfer pricing rules cuts both ways. Taxpayers, unable to predict with accuracy whether their positions will be sustained, are left with large areas of uncertainty in their business planning and financial reporting activities. On the other hand Congress, absent clear standards for compliance, has no way of predicting with reasonable accuracy the actual amount of federal revenue that will be raised by the corporate tax rate that Congress believes it has enacted. The lack of clear standards for judging compliance in an area which involves hundreds of billions of dollars worth of commercial transactions is unacceptable.

(5) **Incentivizing Income Shifting**

Most importantly, the porosity of current transfer pricing rules creates an additional tax incentive for income shifting. The failure of the current transfer pricing rules results in tax planning opportunities which tax advisors (not only can, but) must recommend to their multinational clients, or face a malpractice suit otherwise. Unsurprisingly, U.S. multinational firms routinely book disproportionate amounts of profit in low-tax jurisdictions. For example, of the ten highest-profit locations for U.S. multinational firms in 2005, seven were locations with very low effective tax rates.\(^{17}\)
(b) **The Fundamental Problem – the Fallacy of Uncontrolled Comparables**

At the root of the ineffectiveness of current transfer pricing law is the arm’s length doctrine: the assumption that affiliates within a group transact with other members of the group in the same way that they would transact with unrelated members. This central assumption flies in the face of commercial reality because the *raison de’tre* of multi-national enterprises is the organizational and internalization synergies enjoyed relative to the business efforts of unrelated companies. Since the profits of multinational enterprises are in part generated precisely by internalizing transactions within the firm, an “arm’s length” standard for the pricing of intracompny transactions is senseless – there would necessarily be additional profit from the internalization of the transaction which the “arm’s length” method, by definition, cannot hope to account for.

The belief that “arm’s length” transactions between unrelated parties may be found that are sufficiently comparable to transactions amongst affiliated companies within a multinational group such that they can form meaningful benchmarks for tax compliance and enforcement purposes is fallacious, and this fallacy lies at the core of the current transfer pricing system. Today, multinational groups exist in almost all industries and geographic market segments in which the efficiencies of common control (as opposed to the inefficiencies of unrelated contracting) pose significant economic advantages; moreover in these situations, it is usually not economically feasible to remain in the market using a non-commonly controlled structure. For this reason, the “uncontrolled comparables” relied upon under current transfer pricing rules have not been – and will never be – found with sufficient regularity upon which to base a workable transfer pricing system.
II. **The Case for Formulary Apportionment**

Increasingly, academics\(^{19}\), practitioners\(^{20}\) and European Union (“E.U.”) bureaucrats\(^{21}\) have reached the conclusion that fixing the current international taxation system would involve replacing the arm’s length, S.A. based transfer pricing rules with some form of F.A. regime similar to those employed by some states of the U.S. and Canada\(^{22}\). Basically, F.A. involves dividing up the pie of international corporate income earned by economically integrated international corporate groups amongst its member affiliates using mathematical formulas based on “real economic factors”.

(a) **The Advantages of FA**

The single most important advantage of F.A. is that it does away with the futile search for illusive uncontrolled comparables, focusing instead on the observable economic activity of a group that is performed in a particular jurisdiction. Instead of massive economic studies that try to “estimate” arm’s length prices in the absence of meaningful benchmarks, F.A. systems seek to approximate the economic substance of the affairs of multinational firms by using a comparatively administrable and conceptually satisfying formulaic compromise.\(^{23}\)

By eliminating the fallacy of uncontrolled comparables, the adoption of F.A. would help address the five main flaws in the current U.S. system of international taxation identified above. (1) Moving away from S.A. and its vulnerabilities to income shifting would allow a *massive increase in simplicity* for the international tax system, as the rules under subpart F and the foreign tax credit can be greatly simplified. (2) Simplification would eliminate many of the costly compliance requirements under the current system (such as the contemporaneous documentation rule) resulting in *huge administrative savings* for both taxpayers as well as the government. (3) By plugging the holes in the current defective S.A. system, a move to F.A. 
would raise more revenue.  

(4) The move to apportioning income based on observable economic activity (as opposed to the previous reliance on a fictitious standard) would engender greater certainty in the U.S. international tax system. (5) Finally and most importantly, a move to F.A. would reduce the tax incentive for U.S. companies to shift income. F.A. would thus overcome to a great extent direct profit shifting and transfer pricing problems by neutralizing most transfer pricing strategies in inter-group transactions. However, F.A. does not do away with profit-shifting entirely, and such opportunities still exist via the relationships of the group with non-consolidated affiliates, as well as through the manipulation of the F.A. factors themselves.

(b) The Disadvantages of F.A.

F.A. is, of course, not without its own shortcomings. Formulary taxation has 2 main problems of its own: (1) economic distortions; and (2) factor manipulation.

(1) Economic Distortions

Some commentators have suggested that a move to F.A. (irregardless of the actual formula chosen) would result in greater economic distortion than under the current S.A. system. It was demonstrated as early as 1980 that “to the extent tax rates vary across jurisdictions, formula-apportioned corporate income taxes are similar in their incidence to a set of implicit excise taxes on the apportionment factors.” The generally successful U.S. interstate experience with F.A. would also be no answer here, because the minor competitive imbalances and economic distortions that can be ignored at the state level because of low tax rates are exacerbated at the federal level.

It is generally agreed that the adoption of a F.A. system would result in certain unavoidable economic distortions. There is also consensus that the actual economic distortions
generated by a F.A. system depend heavily on the choice of factors. The argument that F.A. results in greater net economic distortion than S.A., however, is flawed: studies finding sharper tax competition or stronger cross-border tax externalities under F.A. as compared to under S.A. have all had two major weaknesses. Firstly, these studies have commonly left aside some crucial externalities which may arise under S.A., the most important being transfer price manipulation by taxpayers; after taking into account transfer pricing manipulation, the tax competition and revenue effects of a choice between F.A. and S.A. seem to be ambiguous. More fundamentally, it is questionable whether the externality and tax competition effects of F.A. or S.A. taxation can even be logically compared: it has been asserted that the set-ups of the two games are simply too different for any comparisons to be meaningful. The only theoretical conclusion which can be confidently made is that “no unambiguous ranking of S.A. and F.A. taxation is possible with respect to externalities, tax competition and equilibrium tax rates.”

(2) Factor Manipulation

Other critics of F.A. have questioned how resistant the factors used in formulary methods actually are to taxpayer manipulation. Formulary taxation works only if and to the extent that the factors used in the formula actually allocate income on an economically realistic basis – to the extent that taxpayers can manipulate these factors, F.A. would fare no better than current S.A. systems at preventing income shifting. The crux of these arguments is the assertion that “many of the avoidance techniques honed by use under the current tax rules” seem likely to be “just as effective at defeating attempts to tax under unitary formulary methods of taxation”.

The problem of factor manipulation is a very real one, and does not lend itself to easy solutions. Yet, there is no evidence that the potential problem of factor manipulation in a F.A. system will be any more pronounced than the current widespread use of legal and accounting
techniques to shift income merely “on paper” in S.A. systems. Additionally, by breaking down the large, amorphous issue of income source into discrete, identifiable and definable (albeit arbitrary) economic factors, the adoption of a F.A. system would conceivably allow governments to better tackle the various methods of income shifting currently employed by taxpayers through targeted anti-avoidance mechanisms. Hence, a move to F.A., even if it does not neutralize the avoidance techniques of taxpayers completely, would provide governments with the opportunity to finally tackle income-shifting on anything other than a “piecemeal” approach.

The practical response available to any F.A. system in combating factor manipulation is in the choice and definition of the factors used, so as to identify and minimize the opportunities for and scope of factor manipulation; specific rules may also be crafted where necessary to tackle the more egregious and sophisticated instances of manipulation.35

(c) The Bottom Line

At the heart of the debate, F.A. critics seem to question whether a move to a F.A. regime, with the attendant costs which such a radical overhaul of the system entails, would be any more of a theoretical (i.e. economic distortion arguments) or practical (i.e. factor manipulation arguments) improvement over the present system. Any reformed transfer pricing system would doubtless have its imperfections – the crux of the matter is in the comparative advantages which reform would bring. F.A. may arguably suffer from some conceptual weaknesses, but these problems (if they are problems at all) do not seem any greater than what exists under the status quo. In contrast, a move to F.A. would definitively do away with the search for illusive uncontrolled comparables, rectifying the five flaws in the current U.S. international taxation system that are attributable to S.A. The benefits of reform are clear and compelling, and the task at hand is to decide how – not whether – F.A. should be implemented.
III. The Design of a Formulary Taxation Regime

The construction of any tax system necessarily involves choosing between plausible alternatives, and this is no less true in the design of a formulary tax system. The body of proposals collectively labeled “FA” is made up of numerous disparate variations, and it is beyond the scope of this essay to analyze each of these in turn. Instead, the analysis in this part of the essay will be centered upon the various possible approaches in crafting the three building blocks common to all F.A. systems, namely: (a) the ascertainment of apportionable income, (b) the definitions of the factors utilized in the apportionment formula, and (c) the apportionment formula itself.

(a) Apportionable Income (i.e. the Tax Base)

Any decision regarding the apportionable income (also called the tax base) of a formulary tax system may be further split into three sub-choices: (1) whether a unitary or single entity system should be adopted; (2) which parts of a taxpayer’s income ought to be allocable using FA; and (3) the actual rules defining the tax base

(I) A Unitary vs. Single Entity System

The first sub-choice concerns the identification of taxpayers: should apportionment formulae be applied solely against the income reported as accruing to the legal entity over which jurisdiction can be claimed, or should the system force the consolidation of income of related companies for tax purposes? There is no necessary connection between formulary taxation and unitary taxation: formulary methods can be used to allocate the income of a single corporate taxpayer deriving income from multiple jurisdictions as well as the income of a group of related taxpayers. However, failing to extend the tax base of a F.A. system to include all members of an integrated group invites abuse. Taxpayers can defeat the attempt to apportion income based
on real economic factors simply by engaging in the same kinds of profit-shifting transfer pricing transactions that they do under the current system, except this time employing entities that fall outside of the formulary base\(^37\). Hence, the successful operation of any F.A. scheme requires that a unitary system be adopted, which combines the income and factors of all members of a vertically integrated enterprise for the purposes of determining the portion of income from that enterprise to be allocated to a particular jurisdiction.

After establishing that a unitary system is preferable, a subsidiary issue is raised: should the consolidation of the activities of related entities deemed to be engaged in a unitary business be forced no matter where such activities occurred and no matter where the entities or their parents were resident (i.e. “worldwide” consolidation), or should consolidation be limited only to entities in particular jurisdictions (i.e. “water’s edge” consolidation)? Unfortunately, this issue is a lot harder to address. Adopting the same line of reasoning above, the inevitable conclusion is that worldwide consolidation should be adopted – if certain members of an integrated group fall outside the consolidation requirement, the system is vulnerable to abuse. In fact, some U.S. states had in the past dabbled with the worldwide combination of entities for the purposes of the unitary taxation of corporate income\(^38\). However, this unilateral move towards a worldwide unitary system provoked much outrage from most of the developed world\(^39\). Faced with immense international pressure, the states were eventually forced to abandon worldwide combination and retreat to a “water’s edge” definition of a consolidated group limited to US domestic corporations, certain tax haven corporations, and foreign corporations that exceed a threshold of business activity in the U.S.. The same “water’s edge” approach has been adopted by the European Commission in its current F.A. proposals, which limit formulary taxation to income earned in the E.U. rather than a worldwide formulary approach.\(^40\)
(2) **Business vs. Nonbusiness Income**

The second sub-choice concerns the identification of apportionable income: which income streams of a multinational group may be properly seized upon by F.A. systems and apportioned according to identified economic factors? Under the current U.S. interstate F.A. system, states may use their formulas only to apportion the “business income” of multistate businesses; “nonbusiness income”, on the other hand, is allocated to the taxpayer’s state of residence or commercial domicile. The distinction between apportionable “business income” and allocable “nonbusiness income”, though theoretically sound, is not unproblematic in practice. Given the difficulty of distinguishing between business and nonbusiness income, some states have chosen to eliminate this problematic distinction, but it is unclear whether states have the constitutional authority to apportion all income.

In applying F.A. on an international level, both problems are aggravated. The administrative burden of distinguishing between business and nonbusiness income is larger on an international level, simply because of the increased scale of the transactions involved. On the other hand, it is also more likely that source jurisdictions will challenge the apportionment of certain types of income. Given the fact that, as a practical matter, most taxpayers during most tax years have far more significant “business income” than “nonbusiness income”, however, the burden of having the distinction in a F.A. system seems to outweigh any increased accuracy which the distinction provides in sourcing “nonbusiness income”.

(3) **Defining the Tax Base**

The third sub-choice involves the actual rules adopted in defining the tax base. The issue here is not so much the structure of those rules *per se*, but rather the interaction that a unitary F.A. system would have with current requirements by most taxing authorities for taxpayers to
keep at least one set of accounting records detailing the income determined in accordance with their particular rules. Given that no two jurisdictions have exactly the same rules for defining the tax base, if multiple jurisdictions were to adopt a unitary F.A. system, taxpayers would have to keep multiple sets of accounting records for their worldwide operations in order to meet the particularized rules and reporting requirements of each of the jurisdictions involved in the unitary business enterprise. This would place a heavy and unfair burden on taxpayers.

This issue did not arise in the U.S. interstate unitary F.A. experience, because almost all the states piggyback considerably upon the federal government’s definition of corporate taxable income. The Canadian system carries this uniformity further: all provinces follow the federal government’s rules completely, in return for the federal government’s carrying out of the collection and auditing functions on their behalf.⁴⁷ In sharp contrast, the differences one finds between the tax codes of various nations is immense, and it will be neither easy nor costless for taxpayers to construct a separate set of books and records for each taxing authority.

There are three ways to deal with the tax base issue. Firstly and most desirably, the U.S. move to a F.A. system could be accompanied by international coordination of the tax base. This proposal is not as far-fetched as it first sounds: a common definition of the tax base is in fact achievable since multinational firms today already use uniform accounting for world-wide financial reporting purposes. It is thus quite possible to use financial reporting as the starting point for the calculation of the global profit of multinational groups, to be allocated to jurisdictions based on F.A. formulae.⁴⁸ Admittedly, there are still differences in accounting practices amongst countries, but these are fast diminishing due to the increasing adoption of International Financial Reporting Standards (“I.F.R.S.”), most notably by the E.U. and Japan. The U.S. is in the process of transiting to I.F.R.S. as well: the U.S. Securities & Exchange
Commission ("S.E.C.") announced in August 2008 that some large U.S. multinational firms would be allowed to begin using I.F.R.S. as early as the end of 2009, and eventually all American companies would be required to do so.\footnote{49} One added advantage of this proposal is that book income and tax income would be more closely aligned, dampening both the underreporting of income for tax purposes and the overstatement of income for financial reporting purposes.

Alternatively, each multinational firm may be allowed to use its home country’s accounting methods for calculating the global tax base.\footnote{50} This proposal would also help align book income and tax income, but comes at the cost of increased auditing costs for the government.

Thirdly and least favorably, a F.A. regime could simply use the U.S. definition of taxable income and apply it to all affiliates in a multinational group. U.S. based multinational firms already have to calculate the earnings and profits of Controlled Foreign Companies ("C.F.C.s") for the purposes of Subpart F and the foreign tax credit, so the additional information required under a F.A. regime would not be overly burdensome. For non-U.S. based multinationals, the financial reporting to shareholders already required by the S.E.C. or home regulators could form the basis of calculating worldwide income. This approach would create a disparity between U.S. and non-U.S. based multinationals, though the disparity would probably be no greater than it is under current transfer pricing regimes, which often operate from measures of income as determined under local accounting systems.

\textbf{(b) The Apportionment Factors}

After determining the tax base, that base must then be apportioned amongst the various jurisdictions from which the taxpayer has derived income, by applying a mathematical formula against the tax base. The formula determines the percentage of a taxpayer’s tax factors which are
located within each jurisdiction concerned, and the jurisdiction is then apportioned that same percentage of the taxpayer’s net income as its tax base. Choosing the appropriate factors and deciding how much weight to accord each chosen factor are thus critical design factors in any F.A. regime.

In theory, F.A. could encompass a whole host of factors deemed causally related to income creation. In the early days of F.A. in the U.S. for example, sixteen states used formulas which took multiple factors into account, including payroll, property, sales, purchases, expenditures for manufacturing, net cost of sales, labor costs, accounts receivable and capital assets. Over time, however, the trend has been towards the use of a smaller number of factors. In general, all factors can be classified into two main groups: factors at the origin of income (i.e. inputs like labor and capital, measured in a way that reflects their inclusion in the group’s production function), and destination-based factors (mainly, sales by destination).

We consider below the three typical factors used by U.S. states today: (1) payroll, (2) property and (3) sales by destination. Our analysis of these apportionment factors will focus on two main aspects: firstly, we consider their definitions, especially regarding their valuation and location (as the US experience shows, in many cases the definition of apportioning factors is far from easy); secondly, we explore the main arguments for and against the inclusion of these factors in a formulary taxation system.

(1) Payroll

The payroll factor reflects the contribution of labor as a production factor in the generation of corporate income. Traditionally, it is defined as the total amount paid for employee compensation (including salaries, commissions and bonuses) and would be attributed to the jurisdiction in which the employee operates, thus allocating a portion of the taxable pie to each
jurisdiction in which the labor force contributes to the production of profits. The cash-flow-based definition of the payroll factor seems fairly workable in practice: it is feasible to measure and to locate in most cases.

One practical difficulty in adopting a payroll factor is the differences in treatment of indirect forms of labor compensation (e.g. payments in kind, employer-provided social security, pensions, etc). Under the U.S. interstate system, the payroll factor is measured by the amounts reported as compensation to each state for the purposes of state unemployment insurance. Since these amounts are determined under the Model Unemployment Compensation Act, the same metric is used by all states, which goes some way towards addressing the issue of non-cash fringe benefits. On an international level, however, different countries of course have different definitions of compensation, which would have to be adjusted for in order to counteract systemic under- or over-representations in the payroll factor.

More importantly, the great difference in treatment between payments made to employees and that made to independent contractors presents an opportunity for factor manipulation. Some taxpayers may try to evade the adoption of the payroll factory by hiring a third party to perform manufacturing on the taxpayer’s behalf, using the taxpayer’s raw materials, intellectual property and manufacturing expertise. Such “contract manufacturers”, who are willing to perform their roles for very small mark-ups over cost, allow the taxpayer to reap the lion’s share of the profits from manufacturing in a given jurisdiction yet at the same time avoid the payroll and property factors associated with the manufacturing activities. One way to deal with such manipulation is to sweep into the payroll factor net amounts paid for “leased employees”\(^{54}\), though keeping track of the instances and locations of all independent contractors in a multinational group might prove administratively unworkable.
The payroll factor runs into theoretical problems as well. Using payroll as a factor of F.A. transforms the corporate income tax into a payroll tax\textsuperscript{55}, reducing the demand for labor in the taxing jurisdiction\textsuperscript{56} as firms have incentives to reallocate their labor force to low-tax jurisdictions. The distortionary effects on the level of employment associated with the use and weighting of the payroll factor could also potentially result in tax competition between jurisdictions, as governments use the weightage of the factors as instruments to attract businesses.\textsuperscript{57}

(2) Property

The view that capital is a key income-producing factor is widely accepted\textsuperscript{58}, and the use of property as an apportioning factor to split corporate income is a logical extension of that view. Despite the desirability of property as an apportioning factor from a theoretical perspective, its use in practice is beset by the most severe practical problems.

Firstly, there is the problem with the valuation of property. Theoretically, for the purposes of apportioning present corporate income, the property factor should be measured according to the current market value of the assets in question. However, the determination of the fair market value of assets is a costly process, vulnerable to taxpayer (or jurisdictional) misbehavior and normal market fluctuations in the prices of assets would introduce an unacceptable amount of uncertainty into the tax liability of firms. The alternative approach would be to price assets according to historical cost. The problem with using historical cost, on the other hand, is that the original cost of an asset may bear little (if any) relationship to its current market value, which is clearly more economically relevant in the apportionment of present income. The choice between historical cost and market value is succinctly summed up by Professor Julie Roin: “Though the use of original value… resembles nothing so much as the
proverbial “looking under the streetlight because it is too dark to look elsewhere”, it probably is too dark to look elsewhere”.59

A related issue to the choice between market value and historical cost is the matter of depreciation and adjusting for inflation. The systematic overvaluation of older assets would surely result if no allowances are provided for depreciation, and the opposite effect would be observed if inflation was ignored. Allowing for depreciation and/or adjusting for inflation on assets, however, would necessitate the reconciliation of different depreciation systems and inflation values across jurisdictions, thus increasing the burden for taxpayers and governments. If companies were to follow I.F.R.S., these problems may be ameliorated to some extent, but it will always be a difficult issue to address until substantially greater tax harmonization is achieved.

In the U.S., the original cost approach is adopted: U.D.I.T.P.A. measures the property factor by the average value of the taxpayer’s real and tangible personal property. Rental property is valued at eight times its net annual rent, whilst owned property is valued at original cost plus the cost of additions and improvements. Also, depreciation is not allowed. The guiding principle in the definition of the property factor in the U.S. interstate context has undoubtedly been administrative convenience and feasibility, but it is unclear whether the distortions resulting from such a simplistic approach would be unacceptable when adopted at an international level.

More problematic for the property factor is the issue of intangibles. Intangible assets (such as intellectual property, patents and trademarks) present major valuation and localization problems: they are harder to value than most physical assets and even if they could be valued, their intangible nature makes it excruciatingly difficult to assign them a specific situs.60 As a result of these difficulties, the inclusion of intangibles in the property factor invites taxpayer abuse and provides firms with an instrument with enormous tax planning potential.61 For
simplicity and cost-effectiveness reasons, intangibles should be excluded from the property factor, as has been done in the U.S. However, to omit intangible assets from an F.A. formula seems highly unsatisfactory, for it would mean ignoring a significant portion of the assets of many multinationals, as well as disregarding one of their potentially most important profit-generating factors. Rather than simply exclude intangible assets from the property factor altogether because of the acknowledged difficulties, perhaps more research should be directed towards developing practical solutions for valuing and locating them.

On a theoretical level, the property factor is also generally regarded as the one that introduces the most distortions into a F.A. system. Capital or investment is considered the most mobile factor of the three, and the one over which companies have the most control as to location. Thus, a F.A. system that factors in the distribution of property is particularly prone to strategic tax-minimization by firms through factor-shifting across jurisdictions, and correspondingly is also more vulnerable to strategic tax competition amongst national governments.

(3) Sales by destination

The theory behind incorporating gross receipts on a destination basis as an apportioning factor in F.A. is the recognition of the role that demand (and hence the place of demand) plays in corporate profits. That demand constitutes an income-producing factor is hotly disputed, but this theoretical rationale is augmented by the conventional wisdom that sales (or consumers and consumer purchases) are relatively less mobile than production factors (in particular capital, but including also employees). A sales by destination factor thus would result in smaller economic distortions than those from origin taxes. In practice, a sales factor has the advantage of being easy to measure, as sales are simply identified with an objective cash flow amount. For example
in the U.S., the sales factor simply includes all business income howsoever derived (whether from sales of goods, services, royalties, etc.), measured by gross receipts net of returns, allowances and discounts. However, a sales by destination factor also raises a few practical problems of its own, because it is not always easy to identify where sales occur.

For tangible goods, the U.S. sources income from the sales of tangible property at the destination of the goods sold by adopting a delivery rule. Though the delivery rule is certainly a move in the direction of economic reality compared to the “title passage” rule under the current S.A. system, it is far from foolproof. Taxpayers may arrange for products destined for consumers in high-tax jurisdictions to be first sold and shipped to unrelated intermediaries in low-tax jurisdictions at a huge mark up; the intermediary can then on-sell the products (almost at cost) to the ultimate consumers. Such intermediary sales would allow the bulk of the profits in the transaction to be treated for tax purposes as having been made at the intermediary location, whilst keeping within the black letter of the delivery rule. One way to counter such “intermediary sales” would be the adoption of an “ultimate-destination” or “ultimately received” test for attribution purposes, which look to the place at which the goods finally end up for consumption after all transportation has been completed. Such rules, however, would introduce time-consuming and burdensome complexities, particularly if the intermediary is an independent entity.

Moreover, the delivery rule breaks down in its application when it comes to income from the sale of services or intangible goods. In the context of service income, the problems highlighted above for the locating of sales at their destination are intensified. The possibility of the interposition of a middleman, as is the case with tangible goods, means that the location of the purchaser may not be the location of the ultimate user. More significantly, tracing problems
may be more significant in the services context compared to in the context of tangible goods, simply due to their nature.\textsuperscript{69} The development of electronic commerce and advances in information technologies only make this determination harder. The same practical impediments in determining the location of sales of services are also faced when trying to find the destination of sales of intangible goods. A case in point is the determination of the location of digital downloads of information or other content – computers do have a physical location, but vendors rarely have access to such information; all vendors do have is a billing address, which may or may not correspond to the location of the ultimate user.

In the U.S. interstate F.A. system, these problems have been avoided by sourcing services and intangible property sales income at their source instead: income derived from transactions other than the sales of tangible goods are assigned to the state in which the income-producing activity is performed; where an income-producing activity is performed in more than one state, U.D.I.T.P.A. assigns the sales to the state in which the greatest costs of performance were incurred. The problem with the place of service test, however, is that it merely replicates the payroll factor, allocating little (if any) income to the market state. The difference in the treatment of income from the sale of tangible property and that from the sale of services and intangible property is also indefensible: if market states deserve some portion of the tax revenues in the sales of tangible goods, the same concerns ought to justify a similar treatment from providing a market for services or intangible goods. In the interests of intellectual consistency, this disjunct between the treatment of tangible and intangible sales should be abolished: the rule should look, perhaps, at where the services generate benefits, a location that may be adduced in most (but not all) cases by looking at the location of the buyer.\textsuperscript{70}
Another practical limitation with sourcing sales at their destination stems from the problem of jurisdiction. If the taxpayer in question is not otherwise engaged in business in the market jurisdiction such that its only connection to the market jurisdiction is the customer, the taxpayer has insufficient *taxing nexus* with the market jurisdiction and so the market jurisdiction has no jurisdiction to tax the taxpayer – a F.A. system that apportions income to the market jurisdiction would effectively be apportioning that income to a no tax jurisdiction. States in the U.S. have come up with two distinct solutions to deal with this problem: “throw out” and “throwback” rules. Both the “throw out” and “throwback” mechanisms ensure apportionment of corporate income only to states with the jurisdiction to tax them; whereas “throw out” spreads the additional revenue from nonjurisdictional factors amongst all jurisdictional states according to their ratable share of the factors, however, under the “throwback” rule only the state of origin or domicile picks up the extra revenue. It is unclear which approach is intellectually superior (even “throwback” is not without its faults\(^71\)), though judging by the rate of adoption of the mechanisms amongst the U.S. states “throwback” emerges the clear winner\(^72\).

On top of the practical difficulties faced, it has also been suggested that the adoption of a sales by destination factor would result in a unique economic distortion called “cross-hauling”\(^73\). Under a F.A. system that takes into account both input and sales factors, so the argument goes, firms which concentrate production activities in high tax jurisdictions face a high tax burden on their input factors and hence benefit comparatively more from concentrating sales in low tax jurisdictions, cross-hauling output to reduce their tax burden; conversely, firms which produce mainly in low tax countries do not face such high-tax burdens on inputs and require relatively less compensation to sell in a high tax countries. The net effect is that production in low tax jurisdictions will be preferred in high tax countries, resulting in incentives for firms to shift.
production from high tax into low tax countries. As convincing as this argument appears, it seems that the problem of “cross-hauling” is more properly attributable to the use of input factors rather than the sales factor in the F.A. system envisioned: if a single-factor sales formula were adopted instead, the cross-hauling effects would disappear.

(c) The Apportionment Formula

We next consider the design of an appropriate apportionment formula. The current consensus amongst F.A. proponents in the U.S. is that the ‘right’ apportionment formula should emphasize (or even be based solely upon) the sales factor. This suggestion, however, does not take into effect the incidence effects of the formulary corporate income tax. Moreover, the superiority of a harmonized apportioning rule (irregardless of the particular rule chosen) has been definitively demonstrated: too great an emphasis on the sales factor would be politically impracticable for worldwide adoption. Perhaps instead of identifying the most economically efficient formula in theory, it may be more fitting (counter-intuitively) to adopt the rule most politically feasible for widespread (and eventually universal) adoption.

(1) An Emphasis on Sales?

Undeniably, the degree of mobility of factors across jurisdictions determines the total possible distortions caused by F.A. For this reason, it has been argued that the introduction of a sales by destination factor would reduce the mobility of – and hence the elasticity of – the tax base under F.A., thus reducing the tax competition effects induced by F.A. Furthermore, greater relative weight on the sales factor would increase the excise tax effect on sales and reduce it on payroll and property, resulting in a smaller overall efficiency cost from corporate taxation. The U.S. interstate experience is traditionally cited as authority for this proposal. The approach originally recommended by the National Tax Association was the Massachusetts
apportionment formula, which equally weight three factors: payroll, sales and business properties. However, states gradually began moving towards formulas which weigh the sales factor more heavily, and this trend has continued as states have become convinced that sales are the least manipulable of the factors. Today, nearly three-quarters of U.S. states have corporate income taxes which place at least half the weight on sales – eight states even base apportionment solely on sales.

The problem with proposals which emphasize sales, however, is that they focus unidimensionally upon the problem of tax externalities and tax competition effects in F.A. The choice of apportionment factors in a F.A. system in fact has two types of economic implications: (i) incidence effects (i.e. who ultimately bears the tax when F.A. converts the corporate tax into a tax on certain factors but not others); and (ii) tax externalities and tax competition effects. In substance, the choice of apportionment factors is a trade-off between increased tax competition (if greater weight is assigned to mobile factors such as capital) and undesirable incidence effects (if greater weight is assigned to immobile factors such as labor and/or sales). Proposals that emphasize the sales factor in a F.A. formula may help neutralize distortions to investment location and public goods provision, but the trade-off is that they shift the burden of the corporate income tax disproportionately onto consumers.

More importantly, the U.S. experience also demonstrates another trend: states that have not followed the trend to weigh the sales factor more heavily have been mainly those states with abundant natural resources and which thus do not have to worry about business relocations, suggesting that the formulaic choices are dependent upon the state’s degree of exports relative to imports. Extrapolating this trend to the national level, net exporting countries will presumably emphasize production factors in their formulae, whereas net importers would weigh the sales
factor more heavily instead. This observation to a large extent explains the general trend in the U.S. – which is the world’s ‘consumer of last resort’ – towards an emphasis on sales and severely curtails the normativity of proposals to emphasize the sales factor on the basis of the U.S. experience.

An emphasis on the sales factor in an apportionment formula thus falls short of the mark and is not a ‘right’ formula according to the traditional parameter of ‘neutrality’. However, the criterion of ‘neutrality’ by which F.A. proposals have been customarily judged deserves examination as well.

(2) **The Criterion for a ‘Right’ Formula: Neutrality vs. Harmonization**

The simple fact of the matter is that nobody knows for certain what the essential factors that create economic value are. From a theoretical perspective, there are no ‘right’ factors or a ‘right’ formula: any choice of factors and the weight attributed to them can be justified on the grounds of one’s subjective beliefs about the essential factors of profit generation. Because there is in fact no genuine conceptual reason for preferring origin over destination factors, the debate has traditionally fallen back upon the economic principle of **neutrality**: the greater the number of economic distortions a factor or formula theoretically generates, the poorer the proposal.

It thus comes as no surprise that the recurring theme in theoretical work has been the sharp effect the choice of apportionment formula would have on economic decisions; empirical work, however, has not been quite as unambiguous as to the economic effects of F.A. For example, Weiner in her PhD dissertation found no evidence whatsoever that F.A. affected investments cross-sectionally. On the other hand, Klassen and Shackelford (in documenting income shifting within the current U.S. interstate F.A. system) found some empirical evidence that the apportionment formula affects the location of sales but not the **situs** of real factors like
employment and property. Agundez-Garcia concludes, after a survey of the current body of research, that “the [empirical] effects due just to the distortionary burden on the factors in the apportionment formula… remain largely unknown.”

More significantly, most of the empirical work done regarding F.A. has tried to analyze the economic effects (whether in terms of employment, investment or sales) of unilateral variations of the weight of various apportionment factors by a given state. Thus, any negative externalities identified could be attributed to the unilateral-nature of the state policies, rather than to the apportionment factors themselves: the indication is that a uniform apportionment formula in which the factors’ weights were fixed for all participating jurisdictions would avoid these externality effects. This analysis is bolstered by the findings of Anand and Sansing which prove, in the U.S. context, that states' social welfare (the sum of tax revenues, producers' surplus and consumers' surplus) is maximized through coordination of the choice of apportionment formula, irrespective of which formula is actually chosen.

Since a harmonized apportionment rule is empirically proven to be economically superior to a system of jurisdiction-specific ones, and the formula itself has been determined to be irrelevant in achieving this socially efficient outcome, one must question why the principle of neutrality underlies the current debate on formulary design in the first place. It is submitted, instead, that for all intents and purposes the ‘right’ apportionment rule should simply be the one to which most (preferably, all) countries can agree to. Hence, the most crucial factor in evaluating a proposed formula must be its political feasibility for universal adoption.

(3) Politically Feasibility: The Split between Production and Consumption

The political feasibility of adopting a particular unified apportionment formula in substance depends on the way it splits income between “consuming” and “producing”
jurisdictions. As mentioned previously, formulaic choices will vary according to a jurisdiction’s degree of exports and imports: net exporting countries will probably prefer production factors in F.A. formulae, whereas net importers would generally favor the sales factor instead. Hence, a unified formula which unduly prefers origin factors over destination-based ones\textsuperscript{91} is bound to be rejected by net exporting countries; similarly, a formula which places an unfair weightage on production factors over the sales factor\textsuperscript{92} will be repudiated by net importing countries.

One way to reconcile these conflicting positions would be a ‘50:50 split’ (for example, by weighting payroll and property by one quarter each and sales by half) which equally apportions income between producing and market states.\textsuperscript{93} The problem with a 50:50 split, however, is that under traditional corporate taxation principles, the assignment of taxing rights on corporate income has never been based on any demand conditions whatsoever. Apportioning the sales factor too high a weightage may thus take the new distribution of the corporate tax bases of most multinational groups very far from the current one, directing large shares of the multinational corporate tax base to market (rather than production) states. Such a dramatic change in corporate tax base would probably not be accepted by most countries. Realistically, a model closer to the Massachusetts apportionment formula (which equally weighs sales, payroll and property) would probably be more palatable – depending on the political dictates, especially considering the resistance generated by production countries, the weightage upon the sales factor may have to be reduced even further.
IV. The Way Forward

In closing, a few observations will be made on current developments in the E.U. Common Consolidated Corporate Tax Base ("C.C.C.T.B.") and the opportunities which these developments present for the universal formulary tax enterprise.

Since the European Commission started work on a Europe-wide C.C.C.T.B. in 2001\textsuperscript{94}, much effort has gone into theoretical and economic research and the C.C.C.T.B. working group has also drawn much from the U.S. and Canadian inter-state F.A. experience. However, the Commission has yet to decide upon the final apportionment formula (what it calls the "sharing mechanism") to adopt.\textsuperscript{95} Thus, even at this late stage, the U.S. still has the unique opportunity to begin coordinating with E.U. efforts in moving to an interjurisdictional formulary taxation regime, allowing the U.S. to share the "first mover" advantage with the E.U.

Furthermore, coordination with the E.U. on the C.C.C.T.B. could possibly help kick-start the development of a universal F.A. system, for three reasons. Firstly, the U.S. and the E.U. together represent the majority of the developed economies, so coordination between the U.S. and the E.U. on F.A. would present a stronger incentive for other countries to move towards the implementation of a formulary system as well. Both national legislatures and most taxpayers are natural opponents of attempts at tax harmonization.\textsuperscript{96} To legislatures, unification would (rightly) seem like an attempt to strip them of their authority to impose tax incentives or disincentives in response to localized political and economic needs; to taxpayers, coordination would be a threat to their ability to either influence local tax rules or otherwise capitalize on current inconsistencies between the tax rules of different jurisdictions. These behaviors are a function of local power politics, and thus they cannot be dealt with through legal or economic solutions – overcoming them requires political pressure from the international community. A concerted effort by the U.S.
and the E.U. may just provide the strong international pressure required for the development of an international formulary regime.

Secondly, given the O.E.C.D.’s experience with adopting formulary apportionment among a group of independent nations to date, it thus serves as a natural forum for reaching international consensus on the appropriate design for a universal apportionment formula as well. The benefit of having the OECD serve as an ‘honest broker’ to bring together the U.S., the E.U. and non-E.U. countries is that the U.S. no longer appears to be unilaterally imposing F.A. on the rest of the world, which is apt to engender antagonism. An ‘our way or no way’ attitude would likely trigger retaliatory measures from foreign governments as it has done in the past\textsuperscript{97}, which would be a big step backwards from the ultimate goal of international tax harmonization.

Thirdly, the successful adoption of a harmonized formulary tax system requires more than simply having participating jurisdictions start out with the same rules – uniformity would have to be subsequently enforced through a system of centralized management and administration. In other words, there has to be a “principal tax authority” for the filing, verification and auditing of returns; for the adjudication of contested situations, coupled with avenues for administrative or judicial appeals; and for the interpretation of statutory language.\textsuperscript{98} Though the costs of creating such an international institution are substantial, the operation of the current transfer-pricing system makes clear that without centralized tax authority management, inconsistencies are likely to occur, resulting in either double taxation or double nontaxation. To this end, the C.C.C.T.B. task force has already considered the design and creation of precisely the sort of administrative regime described above and provided a workable approach to the “one stop shop”.\textsuperscript{99} Conceivably, this administrative regime could in time be adapted for the administration of a universal formulary regime as well.
Conclusion

The clear advantages of F.A. over S.A. point to the inevitable conclusion that the U.S. should move to a F.A. system. F.A., of course, has its own problems. Yet, the new problems raised by a move to F.A. are at worst no greater than what exists anyway under the current S.A. system. F.A. may not be the silver bullet to once and for all resolve the multitude of complex issues that arise in the arena of international taxation, but a harmonized F.A. system adopted by most of the developed world would significantly address most of the inefficiencies of the current failed arm’s length S.A. system.

Given the clear superiority of a harmonized apportioning rule, the main hurdles to the development of a ‘correct’ mathematical formula seem more political than theoretical. Admittedly, there are practical and theoretical obstacles that have to be overcome as well; bearing the end goal in mind, however, these impediments are not insurmountable. With the E.U.’s recent move towards a C.C.C.T.B., a unique opportunity has been presented to the U.S. to atone for its sins in introducing to the world the bane of transfer pricing. If there ever was a right time and place for the move to formulary apportionment, the time is now and the place is the E.U. Given the other ‘more pressing’ issues plaguing the current administration, however, one fears that the U.S. may let this chance slip by.
Endnotes

1 Daniel Shaviro, Introduction to Fixing the U.S. International Tax Rules (Preliminary Draft), at 3
4 For example, the US system has been described as “a cumbersome creation of stupefying complexity” with “rules that lack coherence and often work at cross purposes” by some observers (Willard Taylor, Testimony before the President’s Advisory Panel on Federal Tax Reform, March 31, 2005.) Testimony before the President’s Advisory Panel on Federal Tax Reform described the system as “deeply, deeply flawed”, noting that it is “difficult to overstate the crisis in the administration of the international tax system of the United States.” (Rosanne Altshuler and Jonathan Ackerman, “International Aspects of Recommendations from the President’s Advisory Panel on Federal Tax Reform,” International Tax Policy Forum Presentation, 2 December 2005.
6 Marsha Blumenthal and Joel Slemrod, “The Compliance Cost of Taxing Foreign-Source Income: Its Magnitude, Determinants and Policy Implications” (1995) 2 Int’l Tax and Pub. Fin. 37. Though the study focuses on the U.S. system of taxing foreign-source income as a whole, a major culprit for the high compliance costs observed (other than the foreign tax credit) is no doubt current transfer pricing law.
9 The contemporaneous documentation rule requires taxpayers to develop documentation of their transfer pricing methods at the time transactions are undertaken, rather than when they are challenged on audit: see Treas. Reg. § 1.6662-6
10 For example, the Comparable Profits Method (“C.P.M.”).
13 Supra note 5, Avi-Yonah, Clashing and Durst (2008) at 43, data from the O.E.C.D. revenue statistics
14 See PricewaterhouseCoopers, Corporate Taxes: Worldwide Summaries
15 In a 1992 study by the General Accounting Office, it was concluded that less than 30% of transfer pricing adjustments proposed by I.R.S. examiners were ultimately upheld in subsequent proceedings: General Accounting Office, International Taxation Problems Persist in Determining Tax Effects of Intercompany Prices, (1992) GAO/GGD 92-89. On the whole, it appears that the IRS usually recovers at trial only a small proportion of transfer pricing deficiencies that it has asserted. Also, the supply of large transfer pricing disputes seems unlikely to be exhausted soon: Nitt, “News Analysis: Another Transfer Pricing Dispute in the Litigation Pipeline,” Tax Notes Today, January 23, 2007.
17 Supra note 5, Avi-Yonah, Clashing and Durst (2008) at 41, data from the Bureau of Economic Analysis, which conducts annual surveys of Operations of U.S. Parent Companies and Their Foreign Affiliates. 2005 was the most recent year with revised data available.
18 This argument is presented in greater detail in Stanley Langbein, “The Unitary Method and the Myth of Arm’s Length,” (1986) 30 Tax Notes 625

22 Some European countries have also experimented with F.A. regimes: see Lee A. Sheppard, “Dowdy Retailer Set to Destroy European Corporate Tax, Part 2” (2005) 38 Tax Notes Int’l 627, at 632-634 (describing limited experiments in Denmark, France and Italy).

23 It is acknowledged, of course, that a truly precise definition and measurement of economic value in a multinational group is practically unattainable.

24 The exact amount of revenue that would actually be raised, however, is hotly contested. Numerous empirical studies have tried to estimate how much revenue such a change would raise: see e.g. Avi-Yonah, Clasing and Durst (2008), supra note 5, Appendix A; Douglas Shackelford and Joel Slemrod, “The Revenue Consequences of Using Formula Apportionment to Calculate U.S. and Foreign-Source Income: A Firm-Level Analysis” (1998) 5(1) Int’l Tax and Pub. Fin. 41; Kimberly Clasing, “Multinational Firm Tax Avoidance and U.S. Government Revenue” (2008) Working Paper. However, all these estimates are based on financial statements and not taxable income, so the estimates are questionable at best: Joann M. Weiner, “Redirecting the Debate on Formulary Apportionment” (2007) 115 Tax Notes 1164, at 1168 (“Any estimate of revenue consequences based on financial income begins from a bad position and ends up in a worse position”) citing John Graham and Lillian Mills, “Using Tax Return Data to Simulate Corporate Marginal Tax Rates”, Paper presented at the ATPI Conference on Dec. 6, 2006 (“… one potential deficiency of almost all tax rates used by researchers to date is that they are calculated using data from financial statements.”).

25 For example, with controlled affiliates below the qualifying ownership level: M. Gérard, "Further Research Needed on Comprehensive Approaches", CESifo Forum 1/2002, 38-40 See below, (2) Factor Manipulation, at pp. 8-9

26 It must be mentioned here that, in addition to these two identified issues, critics have in fact pointed out a whole host of other practical problems in coming up with a satisfactory formulary taxation regime; because these other problems relate more to the design of a F.A. regime rather than the fundamental theoretical soundness of F.A. itself as a concept, however, these other issues will only be taken up below when we take a closer look at the essential elements in the design of a formulary taxation regime: see below, III. The Design of a Formulary Taxation Regime, p. 10 onwards


32 Infra note 87, Agundez-Garcia (2006) at 64

33 Infra note 59, Roin (2007) at 5. It is important here to emphasize the distinction between two similar but distinct concepts: distortions in the allocation of capital, jobs and assets in order to minimize the tax bill under a F.A. system (i.e. economic externalities, which has been dealt with above); and the shifting of profit through various legal and
accounting methods (i.e. profit- or income-shifting). It is generally agreed that F.A. is vulnerable to externality problems with regard to the capital allocation caused by the activity formula (while profit shifting does not occur), whereas S.A. systems are vulnerable to externality problems caused by transfer pricing manipulation and profit shifting (though this does not have any real effects on the allocation of capital in the common market). Julie Roin, however, questions whether F.A. is as immune to profit-shifting as is believed.

35 In exploring the issues raised in the design of a formulaary taxation regime below, the opportunities for factor manipulation, and the ways and means to neutralize such avoidance avenues, will be addressed on a factor by factor basis: see below, (b) The Apportionment Factors, from p. 14 onwards.

36 In fact, the norm in the U.S. is precisely that formula apportionment looks solely to the income and factors generated by individual corporations. Although all states that tax corporate income use FA, only about one third use some version of unitary taxation and consider the income of out-of-state affiliates of the taxpayer: Martin Sullivan, “Economic Analysis: Lessons for Congress on Closing Loopholes” (2006) 110 Tax Notes 1024, at 1025.

37 In fact, the failure of states under the current U.S. interstate F.A. system to adopt unitary accounting is one reason that the effective state income tax rate “was only a third of the 6.8% average statutory tax corporate income tax rate”: Robert McIntyre and T.D. Coo Nguyen, State Corporate Income Taxes 2001-2003 (2005), at 3. Available at http://www.ctj.org/pdf/corp0205an.pdf.


39 The furor was immortalized in Barclays Bank PLC v California Franchise Tax Board, (1994) 512 U.S. 298 at footnote 22:

“The governments of many of our trading partners have expressed their strong disapproval of California’s method of taxation, as demonstrated by the amici briefs in support of Barclays from the Government of the United Kingdom, and from the Member States of the European Communities (Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, and Spain) and the governments of Australia, Austria, Canada, Finland, Japan, Norway, Sweden, and Switzerland. Barclays has also directed our attention to a series of diplomatic notes similarly protesting the tax… The British Parliament has gone further, enacting retaliatory legislation that would, if implemented, tax United States corporations on dividends they receive from their United Kingdom subsidiaries…”


41 Then again, certain types of business income fall outside of these formulas: for example, rents received by the group with respect to real property are directly allocated to the state in which the property is located.

42 Jerome Hellerstein and Walter Hellerstein, State and Local Taxation Cases and Materials, (8th ed., 2005) at 617-618

43 Much ink has been spilt on this topic. See, for example, Walter Hellerstein, “The Business-Nonbusiness Income Distinction and the Case for Its Abolition,” (2001) 21 St. Tax Notes 725; William Dexter, “The Business versus Nonbusiness Distinction under the Uniform Division of Income for Tax Purposes Act” (1978) 10 Urb. Law. 243


45 For example, it is almost certain that source jurisdictions will challenge the efforts of residence jurisdictions of multinational firms to apportion real property rental income and gains from the sale of real estate.

46 For a detailed discussion of the reasons against having the distinction between business and nonbusiness income in international F.A. systems, see Hellerstein and McClure (2004), supra note 40, at 202-203

47 Supra note 19, Weiner (2006) at 68


50 This was suggested by the E.U. Commission for inter-E.U. purposes: COM (2001), supra note 21, at ¶. 13.1


52 Though the discussion in this part of the essay will focus primarily on the factors as adopted by U.S. states in the inter-state context, it should be mentioned here that the Canadian apportionment system is another important example of F.A. in practice. For a review of the Canadian apportionment system, see D.E. Wildasin, “State and Provincial Corporate Income Taxation. Current Practice and Policy Issues for the United States and Canada”, (2000) 48 Canadian Tax Journal 424

53 Most states in the U.S. rely on the definitions of these factors as provided in the Uniform Division of Income for Tax Purposes Act (“U.D.I.T.P.A.”), but complications nonetheless abound in practice due simply to the variety and complexity of today’s commercial transactions and business structures.

54 This suggestion is similar to how “leased property” is treated in the property factor context. Canada in fact includes “fees paid to another person for services that would normally be performed by employees of the corporation” in the payroll factor. The experience of the Canadian tax authorities in making that distinction is thus instructive in analyzing the effectiveness of this rule.

55 Supra note 28, Charles McClure, Jr. (1980)

56 The reason for this is that the final incidence of the corporate tax is on employment: D. Wellisch, Theory of Public Finance in a Federal State (2000, Cambridge: Cambridge University Press)

57 Infra note 88, Goolsbee and Maydew (2000). The argument is used in the article to show the superiority of a uniform apportioning system for all states.

58 Note, however, that the Canadian provinces do not use capital as an apportioning factor.


60 For a more detailed analysis of the valuation and locating issues of intangibles in F.A., see Ch.E. McLure, Jr., "Preliminary Thoughts on Federal Use of Formula Apportionment in the Taxation of Income from Intangibles", (1997) 14 Tax Notes International 859

61 In fact, one of the major techniques by which taxpayers perform income shifting under current transfer pricing law is to site intangibles in subsidiaries in low-tax jurisdictions, and assign most of the income earned by the group to those subsidiaries as “royalty payments”. By including intangibles in the property factor, the problems associated with these techniques will remain.

62 For example, intangibles account for approximately 70% of the value of the top 150 U.S. companies: Sebastian Mallaby, “Powerful Brand Carries Worth Far Beyond a Familiar Name” The Times Union, Aug 13, 2006, b-8.

63 Infra note 87, Agundez-Garcia (2006) at 51


65 See, for example, A. Schäfer and Ch. Spengel, "The impact of ICT on Profit Allocation within Multinational Groups: Arm’s Length Pricing or Formula Apportionment?", (2003) ZEW (Centre for European Economic Research) Discussion Paper No. 03-53

66 Put another way, even in a high-tax country, firms have an incentive to sell as much as possible.
67 In this sense, a sales by destination factor complies better with the criterion of neutrality.
68 See Treas. Reg. § 1.861-7(c). Note, however, that there is no necessary correlation between the use of the title passage rule and the current S.A. system. Indeed, many commentators have long suggested replacing the U.S. title passage rule with a more substantive rule: e.g., American Law Institute, Federal Income Tax Project, International Aspects of United States Income Taxation: Proposals on United States Taxation of Foreign Persons and of the Foreign Income of United States Persons (1986) at pp. 20-23.
69 One amusing thought-exercise involves where to source a haircut performed in an airport barbershop: the location of the shop, the purchaser’s residence, or the location where the purchaser will be traveling “for the useful life of the haircut”? See Dolores W. Gregory, “Formulary Apportionment in a Service Economy: After 50 years, Is U.D.I.P.T.A. in Need of an Overhaul?” 44 Daily Rept. For Executives (BNA) J-1 (March 7, 2007)
70 This is in fact the approach adopted in the U.S.-India Double Tax Convention, which allocates the primary right to tax income derived from the performance of technological and other specialized services based on the location of the buyer rather than the place of performance, contrary to general U.S. practice.
72 The “throw out” rule was used in Pennsylvania until the Pennsylvania Supreme Court held the regulations involved to be contrary to Pennsylvania’s Corporate Net Income Tax Statute in Commonwealth of Pennsylvania v. Gilmour Manufacturing Company, (2003) 822 A.2d 676. Another reason for the more widespread adoption of “throwback” stems from the fact that the “throwback” rule is enshrined in the U.D.I.P.T.A. Note, however, that not all states have adopted “throwback”.
73 Supra note 30, Gordon and Wilson (1986)
74 See, for example, Avi-Yonah, Clausing and Durst (2008), supra note 5.
76 Supra note 71, Fox et al (2005)
78 The N.T.A. recommended that states adopt the Massachusetts apportionment formula in 1933.
79 By 1978 when the U.S. Supreme Court upheld the constitutionality of Iowa’s single-factor sales formula in Moorman Manufacturing Co. v Bair, (1978) 437 U.S. 267, six states (including Iowa) had formulae which gave more weight to the sales factor: Kirk Stark, “The Quiet Revolution in U.S. Subnational Corporate Income Taxation”, [2001] I.B.F.D. 523, at 528
84 Infra note 89, Anand and Sansing (2000) at 193
This conclusion was also reached (in an analysis of the U.S. interstate system) by A. Goolsbee and E.L. Maydew, "Coveting Thy Neighbor’s Manufacturing: the Dilemma of State Income Apportionment", (2000) 75 Journal of Public Economics 125.


This is as opposed to the political feasibility of harmonization per se, which is addressed in the last part of this essay

See, for example, the proposal for a profit split in Avi-Yonah, Clausing and Durst (2008), supra note 5

This was advocated by Hellerstein and McClure (2004), supra note 40

This has been proposed, for example, by J. Francis & B.H. McGavin, "Market Versus Production States: An Economic Analysis of Apportionment Principles", in Thomas Pogue, ed., State Taxation of Business: Issues and Policy Options (1992, Praeger: Westport); Weiner (2005), supra note 83

Supra note 21, COM (2001)

As of the latest CCCTB working group meeting on 27-28 September 2007, details on the sharing mechanism had not yet been fully worked out and were not presented: European Commission, “CCCTB: possible elements of a technical outline”, CCCTB/WP057


For example, the United Kingdom in the 1980s and 1990s enacted but did not implement retaliatory legislation after some U.S. states adopted a unitary tax: for more details, see footnotes 39 and 40, above.


The U.S. led the way in adopting the current transfer pricing regulations in 1968 (these were then amended in 1994), which the O.E.C.D. and most of its major trading partners eventually followed.