# BIJURAL SERVICES AS FACTORS OF PRODUCTION*

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# I. Introduction

This study is primarily concerned with the security of transactions and contracts in contexts in which there is more than one legal system – in bijural (or multijural) societies – and with the contribution that bijural lawyers can make to the security of transactions and contracts, that is with the productivity of bijural lawyers. It is, as a consequence, focused on the demand for bijural lawyers as factor inputs in the production of contractual security and, at one remove, transaction security.[1] To be in a position to proceed with this analysis, certain basic concepts must be clarified and the domain of the inquiry delineated. We devote the Introduction to these tasks.

## 1.1. What is bijuralism?

To answer this question it is useful to begin by distinguishing between *societal* and *individual* bijuralism. Countries such as France, Germany, and Italy operate under one legal system and are therefore monojural, whereas Canada, the United Kingdom, and the United States are bijural given that Quebec, Scotland, and Louisiana use the civil law and the other jurisdictions in these countries use the common law.[2] On the basis of this common law-civil law distinction, the European Union is also bijural.

However, the distinction must be used with care as some equivalent of bijuralism and multijuralism is found in Canada (minus Quebec) or in the European Union (minus England and Ireland), because there are often considerable differences between the civil law in France and Germany (say) or the common law in the United States and the United Kingdom (say).[3] Bijuralism and multijuralism are therefore widespread realities.[4] In what follows, to simplify the presentation, we limit ourselves to bijuralism when the context makes clear that the extension of the analysis to multijuralism is straightforward and adds little to our understanding of the security of transactions and contracts.

From the point of view of individual legal professionals, societal bijuralism provides them with investment opportunities in that acquiring knowledge of, and experience in, a second legal tradition may have a positive rate of return – may increase the income flow of the investing law professionals. In other words, there are circumstances related to such realities as commercial and/or other interactions between members of a society or among members of different societies which can induce a common law lawyer (say) to invest in the learning of civil law. In view of what was said in the last paragraph, it should be clear that it may also be worthwhile for a British common law lawyer (say) to invest in the learning of American common law.

Put differently, if we accept to treat the acquisition of knowledge as investment in human capital, it is reasonable to treat the learning of a second legal system as the acquisition of human

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[1] Here and there, to illustrate and/or clarify a point, we do touch on other matters such as nation-building in a country such as Canada or integration in the European Union.

[2] In some instances, the central or national government uses the common law as is the case in the UK and the US; in other instances, in Canada for example, it uses both the civil and the common law.

[3] According to *The Economist* (2004, p. 67), the British law firm Allen & Overy employs in London 75 American lawyers or lawyers who have qualified in the United States "to work almost exclusively on American business", which illustrates the differences between the law and its practice in these two common law countries.

[4] For a documentation of that fact, see www.droitcivil.uottawa.ca/world-legal-systems/eng-monde.html.

capital. That it makes sense to do so follows from two realities which are sufficient to establish that an action is one of investment. First, the acquisition must be costly and second the consequent flow of income must be spread over a number of future time periods. The costs of learning a second legal tradition take the form of cash outlays (tuition, books, and other materials), effort, and so on, but also, most importantly, of the flow of income foregone consequent on the fact that the time devoted to learning the second legal tradition is not sold in the marketplace or used elsewhere. The benefits associated with these costs must accrue over time otherwise the expense would be an act of consumption, not one of investment. (See subsection 4.3 below).

Implicit in the preceding discussion is the idea that the flow of benefits associated with an investment in bijural human capital is fully captured by the legal professionals undertaking the investment – that, in the language of economics, the yield on bijuralism is strictly private. But, in a number of circumstances, it is possible that associated with, and additional to, that private yield, there could be a social yield flowing from the private investments in bijuralism. That would be the case if, for example, foreign direct investors in commercial and industrial enterprises, uncertain of whether their future business activity would require the services of bijural lawyers, would, to deal with this possibility, decide to locate in a jurisdiction in which bijural lawyers were in more abundant supply. In a case such as this some of the benefits to society from the foreign direct investment would not accrue to the bijural lawyers whose services could eventually be needed by the commercial and industrial investors. Or, to give a second example, if bijural lawyers in a given jurisdiction were invited to train bijural lawyers in another jurisdiction and in the process created sufficient diplomatic goodwill to make all relations between the two jurisdictions easier to carry on, the yield to diplomatic goodwill would not be appropriated by the bijural lawyers, but by the two societies at large.

In addition to having a societal dimension and to being a form of human capital, bijuralism possesses a third dimension that is also important in the present study: that of being a feature of the context of many transactions. Indeed, when individuals from countries with different legal traditions have to work together as was the case in the transaction in which English and French firms undertook the construction of the Euro Tunnel under the English channel, or when the exploitation of oil fields in Nigeria brought together multinational oil companies from a number of different jurisdictions, the transactions and the contracts to which they give rise will generally contain elements from different legal traditions. In cases such as these, the cohort of lawyers who act for the various principals may be bijural or, if they are monojural, will have to operate in different legal traditions. This dimension of bijuralism is particularly important as a factor in determining the security of transactions and contracts.

*1.2. Bijuralism and bilingualism.*

There is a tendency in some quarters to assume that bijuralism is an outgrowth or emanation of bilingualism. As a statement of fact to the effect that societal and/or individual bijuralism requires or rests on bilingualism, the proposition is obviously wrong. The existence of civil law in Louisiana and Scotland is sufficient to put that view to rest. Moreover, if we acknowledge that bijuralism extends to differentiations within civil law and common law systems, the assertion that bilingualism is a prerequisite or a requirement for bijuralism is even more far fetched. We must conclude, on the basis of historical facts, that bijuralism can exist in a completely monolingual context.

The absence of a necessary connection between bijuralism and bilingualism cannot be used, however, to deny the existence of any relationship between the two phenomena. We note two such relationships without prejudice as to the possibility that more of these could exist.[5]

Linguists and other specialists of languages have noted that individuals who become *fully* bilingual do not translate from one language to the other but use each language, as it were, independently or separately from each other. It is as if these individuals were in possession of two mother tongues (Papineau, 1978). There are, of course, very few individuals who are fully bilingual, but in some societies there are a good number who closely approximate that condition. From our point of view, the surrogate possession of two mother tongues by an individual implies that he or she is in a position to fully capture and transmit in each language, the subtleties of spoken and written exchanges. The well-known *traduttore traditore* phenomenon of translation has been by-passed. There are two implications of this state of affairs. First, it indicates that legal professionals who are *fully* bijural are in a position to understand the subtleties of the legal systems they know without "translating" from one to the other. It follows that *ceteris paribus* the productivity of bijural lawyers is likely to increase as they become more knowledgeable in two legal systems. Secondly, and of great importance, fully bilingual lawyers who become bijural in legal systems expressed in different languages will be able to capture the subtleties of these systems better than bijural lawyers who have a poor command of one of the two languages or are monolingual.

The second relation between bilingualism and bijuralism rests on the fact that some legal expressions or words may have different meanings in different languages. Bilinguals are more likely than monolinguals to deal efficiently with this phenomenon.

*1.3. The domain of our inquiry.*

Our discussion will centre on legal activities that take the particular form of contractual relations or are closely related to such relations. Excluded therefore are areas in which legal activities are also important but where the contractual dimension is missing or is secondary. Examples of such areas are torts and regulation. Within contractual relations, we will focus on domains, such as commercial and financial relations, corporate affairs, and construction, whose economic content is particularly salient, rather than on those, such as the law of marriage, that are more directly concerned with the person or the family.

We have two main reasons for restricting the field of our inquiry in this way, one pertaining to the quantitative significance of the two areas of activity, the other to the comparative advantage of an economic approach in analysing such phenomena. As observation reveals, the legal services whose international component is the highest, and in which, for that reason, the demand for bijural expertise is likely to be the most important, are those that are mainly involved with contractual relations in areas such as commerce, industry, construction and finance. Both non-contractual domains, such as torts, anti-trust and regulation, and contractual relations linked to the person (marriage and divorce, personal property, etc.) may also include an international aspect and may benefit from bijural expertise but, as a rule, they do so to extents that are not as quantitatively significant at an aggregate level as is the case with the contractual relations on which we focus.

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[5] We return to the relationship between language and legal systems in subsection 6.4.

This may be the result of differences in the effect of national preferences or, more simply, in the monetary amounts at stake (thus typically, conflicts on divorce are likely to involve smaller amounts than litigation related to international commerce or corporate business). Whatever the explanation, the fact that commercial contracting (understood broadly) is much more important, quantitatively speaking, than the other domains is reflected in a much greater presence of multinational law firms in that domain and in the way these firms allocate their attention and resources. Commercial contracting is also central to international arbitration, whose importance has grown enormously in recent times and is certainly an element to take into account in any discussion of bijuralism.

The second reason for focusing on commercial contracting is that it involves variables that are more easily or plausibly translatable in monetary terms and more amenable to economic analysis, than are, say, regulation or the laws of marriage and divorce. In our view, it is essential that contractual relations be always seen together with the transactions that underlie them. In fact, we assume that the main concern of all parties to a contract is the security of the transactions themselves and that characteristics of contracting, taken together, constitute one instrument among others to pursue that objective. Many transactions concern relations that have the characteristic of being economically quantifiable and this characteristic has a counterpart, actual or potential, in the associated contracting. Now, even if economic analysis is often successfully applied to objects which are not easily quantifiable, it does help, in terms of plausibility and exposition, if quantification is relatively straightforward. Thus, restricting the object of our attention will prove useful for analytical and expository reasons. At the same time, it will not be as serious a limitation as it may seem because, to a large extent, what we will have to say when focusing on the security of commercial contracting will also apply, with some adaptation, to the areas that we do not consider explicitly.

*1.4. Why an economic approach.*

In many of its aspects, bijuralism has been studied in a very fruitful and illuminating way from a legal perspective. What can we expect from an economic approach? Again, it is first of all in the transactions that underlie contracting that we must look to find compelling reasons for adopting such an approach. As is well known, the nature of these transactions has changed enormously over the last decades and this has profoundly affected the world of contracting and of dispute settlement. Commerce, industry, investment, finance and construction have become much more international, a fact which in turn has changed many of the variables, such as competitive pressure, cost of time, size and nature of risk, information, or the regulatory environment, that affect them. Recourse to economic theory is indispensable to take these changes and their implications into account to a sufficient degree. To give an example of the relevance of economic theory in this matter, let us consider the case of international specialization. As analysed until recently, specialization used to involve mostly finished products on the one hand and raw material or natural resources on the other. Thanks in particular to Kalyan Sanyal and Ronald Jones (1982),[6] it is now generally realized that a large part of specialization (in the past as well as in the present, albeit to a much lesser extent) takes place at the level of *activities* within each process of production. Nowadays, a finished product has a large chance of having been designed, manufactured and conditioned or packaged in a sequence of stages or steps located in three, four and sometimes more countries or geographic areas. As a consequence, considerations such as the timing of production, the control of quality,

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[6] See also Jones (2000).

and the punctuality in delivery become truly essential, and have obvious implications for the role and aims of contracting.

As well, at the underlying level of transactions, an important factor of change is the growing weight of countries – in Asia or South America in particular – that until recently were playing a relatively negligible role in international commerce. Countries still classified as developing, like China, India and Brazil, or new members of the OECD, such as South Korea and Mexico, are now responsible for a large fraction of international transactions, whether commercial, financial, or pertaining to services like patents, licenses, copyrights, and so on. Again this has important implications for legal international relations and for the interaction between legal systems and cultures.

On the legal level, globalization has led to many changes in the conditions of contracting, the role of national legal institutions and arrangements, and the magnitude and nature of international procedures and institutions for settling disputes. A particularly significant aspect of globalization is the spread of large international (or multinational) law firms and the enormous growth of arbitration *lato sensu* – including mediation, conciliation, etc.[7] Further changes of a similar magnitude at both levels, transactional and legal, are likely to take place in the future. It is in this context of a rapidly changing world that one must address the very strong incentives that firms and other agents have to make transactions as profitable and secure as possible.

A second reason for addressing contracting and bijuralism with the tools of economic analysis is that these tools have evolved, over the last decades, in ways which make them even more productive than hitherto. Economic concepts and mechanisms such as supply and demand, marginal costs and benefits, production functions, and competition and monopoly have certainly not become less central and their use less fruitful. But, in the course of time, this traditional core of economics has been supplemented by a host of new concepts and mechanisms which are particularly relevant for our purpose. For example, we will make a large usage of the concept of contractual incompleteness, which only recently has become important in economics (a concept, indeed, that is still far from being completely elucidated).

*1.5. Europe.*

Common law and civil law are well represented in the European Union (EU); furthermore economic relations across the borders of the member countries are multifaceted and intense. These two facts are sufficient for us to devote particular attention to the way bijuralism operates and may evolve in that zone. As already noted, another feature of the EU which makes it propitious for a study of bijuralism is that, coexisting with the main divide between common law and civil law, there are substantial differences between the legal systems and cultures of all member countries, including those that belong to the civil law tradition. This raises the question (to which we do not attempt to provide an answer) of whether the divide between the common law and the civil law, typically associated in the literature with bijuralism, pre-empts other distinctions among systems, or on the contrary has a significance which is only more or less of the same order of magnitude as the others.

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[7] For a recent analysis of the "multinationalization" of law firms, see *The Economist* (2004).

The European Union is engaged in a very ambitious program to establish a "single market", understood as one in which all impediments to commercial or other transactions across the borders of the member countries have to be eliminated. Under the logic of this program, the fragmentation of the legal space of the EU that originates in the coexistence of different legal systems and cultures appears itself as a form of obstacle to trade – a "non-border barrier" – which implies that some effort at reducing it should be undertaken. If this happened to lead to a full convergence of legal rules and procedures, this would undermine bijuralism both as a characteristic of the situation and (with regard to legal training or knowledge) as an objective. On the other hand, if bijuralism, as a form of knowledge, were to prove very effective in reducing the costs generated by fragmentation, the need to eliminate or reduce that fragmentation by way of harmonization would become much less pressing, even under the perspective of the "single market" program. The matter must take into account that much of legal activity, especially pertaining to commercial contracting, is being pursued within and among large multinational law firms, and also take into account that a large part of that activity is increasingly channeled through institutions and procedures of arbitration. We will see that different forces and influences are currently at work in Europe, which explains that different trends, not all fully harmonious, are perceptible.

*1.6. Organization of the paper.*

Transaction security derives, in part, from contractual security. Bijural lawyers contribute to the latter, but there are a host of other factors which also act on, which are in effect substitutes or complements to, contractual security. The next section looks into the nature and operation of these various factors. The starting point of Section II, that the demand for bijural services are inputs in the production of contractual security, leads us to inquire, in Section III, into the workings of derived demand and into the forces that determine its behavior. In Section IV, we turn our attention to an examination of the incentives that induce certain individuals to become bijural. The concern of the section is therefore with the supply of bijural lawyers. Sections V and VI are closely related. The first examines some processes of market adjustment when there are exogenous changes in the demand for bijural lawyers. The second focuses on historical exogenous disturbances that, in all probability, have affected or may affect the demand for bijural lawyers. Section VII concludes the paper.

## II. Bijural Services in the Production of Transaction Security

*2.1. An overview of the argument.*

Bijural expertise mitigates the difficulties inherent in transacting across legal systems. This may seem obvious but the channels through which this effect is brought about need to be spelled out. For that purpose it is convenient to break down the overall relationship responsible for the effect into clear-cut relations, amenable to economic analysis. Figure 2.1 provides an overall panorama of these relations. Bijural services may also fulfill functions unrelated to transaction security. Two such functions are noted in the lower part of Figure 2.1. One (labeled X) is direct consumption, that is, the direct provision of utility to individuals. This includes the satisfaction of intellectual curiosity, but as an exclusive motive, it is not likely to be quantitatively significant at the aggregate level. This consumption utility may be more relevant as one element in a wider set of determinants, or as a factor that reduces the cost of acquiring bijural knowledge for professional purposes. Also –

as was often said of the ancestor of bijural knowledge, comparative law – knowing several systems may enrich or deepen the understanding of one's own system or of the law in general, and may thus be a valuable part of a general legal education.

*[Figure 2.1 goes about here]*

The other function unrelated to transaction security is labeled Y in Figure 2.1. It concerns collective goals such as social cohesion, nation-building, or European integration. These motivations for promoting bijural knowledge may be very important in some contexts – the alternative to fostering bijural competence being possibly the dominance of a single legal system, which may be undesirable in terms of social cohesion or of the other goals just noted. The functions labeled X and Y will have a role to play in Sections IV and VI, but for the moment we disregard them and concentrate on the two connections summarized in the upper part of Figure 2.1, both concerning the relationship between bijural services and transaction security.

We consider a single economic transaction taking place among agents located in two areas that have different legal systems. We suppose that the agents expect the transaction to be profitable but that it will also entail some risk. We suppose that diminished risk, that is, increased security is seen in a favorable light by all parties. In some circumstances such an assumption may be unwarranted or even wrong – for instance, when the insecurity of the contract is one of its main attractions for one of the parties. But the assumption cannot be wrong on average. Otherwise, many aspects of transacting, in particular the fact that it is typically associated with costly procedures such as the writing of contracts, could not be explained. And it is clearly the average which matters for our purpose.

As a first step (starting from the right-hand side of Figure 2.1), we can observe that both transaction security (denoted J) and expected returns or profits (K) contribute to the utility derived from the transaction, or under some assumptions, to its capitalized present value. What complicates the matter, as we shall see, is that transaction security has also a direct positive effect on expected profits as portrayed, in Figure 2.1, by the vertical arrow relating the two. Then, as a second step, we consider the main determinants of transaction security. Many are non-legal factors (H), such as the prospect of repeat business among the parties to the transaction, and their reputation. We devote some attention to these. The factor we will most directly be concerned with, however, is contractual security (G). We define this broadly: it includes not only features of the result of the negotiation and of the writing of a contract, but also of the litigation or conflict resolution processes that might arise later during the implementation of the contract. In other words, particulars of both the contract itself (E) and the legal procedure used to resolve possible conflicts about it (F) are factors in the determination of what we call contractual security. The latter, however, is also influenced by a third source: the particulars of the legal environment (V). Figure 2.1 recognizes these three categories of determinants.

Assuming that transactions are always governed by contracts, we focus in the subsequent steps on contractual security, giving to that expression the broad meaning just suggested, namely the set of properties – pertaining to the conclusion of contracts, to litigation about them, and to the legal environment both processes take place in – that enhance the security of the transaction. This is what we mean when, in the language of economics, we say that contractual security is a factor input in producing transaction security.

It is at the level of contractual – not directly transactional – security that our central concern fits most naturally in the analysis. That concern involves taking into account both the plurality of legal systems and the intervention of bijural skills. To understand the impact of these variables, we consider how features of the contractual process, of litigation, and of the legal environment may contribute to contractual security. We study each paying special attention to the fact that contractual security involves, potentially at least, different legal traditions, systems, and cultures and to the role that contractual security may confer on bijural know-how.

In the case of the contractual process, we note that, up to a point at least, a contract provides more security when it takes into account in an explicit way more contingencies (possible events or circumstances), that is, in the jargon of economics, when it is more *complete* (B). We observe also that the signatories of a contract, or their counsels, coming from different legal traditions will tend to face a problem of common understanding, or *monosemy* (C) of the terms used in the contract. To mitigate that problem, the legal meaning of the terms may have to be explained in the contract in more detail than would be necessary if only one legal set of meanings, that is, one legal system, was involved. The degree to which such *explication de texte* − explicitation of the terms used − is necessary to obtain a given level of monosemy will depend on the bijural skills of those involved in the contracting process.

We also make the point that bijural knowledge is valuable not only in contract writing but also in post-contract litigation. Understanding differences in legal procedures and practices seems essential, which again suggests that the problem of monosemy is raised in the context of litigation as it is in that of contracting. Finally we consider the relationship depicted in the upper part of Figure 2.1, dealing with the role of bijural training not in the writing of contracts but in the making of the law and other similar collective legal activities. We argue that this may also have an important effect on contractual security.

## 2.2. *Expected return and risk reduction as providers of utility.*

The concept of risk in everyday language has a different meaning from that which it has acquired in theoretical economics and finance. Because of this difference, we must clarify the sense we are giving to the concept in the remainder of this section.

In common parlance, risk is the possibility of losing, or at any rate of receiving less than the expected return. The meaning is different in economics where typically risk is the possibility that one may get more as well as less than the expected (average) return. This explains why it can be rational to be a "risk lover", that is to prefer more risk to less for any given expected return. Risk loving in that sense is uncommon, and we will assume that all agents are either risk-averse (for a given expected return, they prefer risk to be as low as possible) or risk-neutral (they do not care about risk, only about returns). Figure 2.2 is based on a framework which, even though valid only under relatively restrictive assumptions, is widely used in economics and finance.[8] Expected return

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[8] With dispersion measured by the variance or the standard deviation, the assumption must be either that the utility function of the individual concerned is quadratic, or that the probability distribution of returns is gaussian. In addition we disregard diversification based on blending portfolios with a riskless asset in a context of market equilibrium along the line of Tobin's "preference for liquidity" model, the CAPM model, or similar models.

is measured on the vertical axis and some indicator of dispersion around the mean – that is, of risk, in the sense just noted – on the horizontal one.[9]

*[Figure 2.2 goes about here]*

Point *A* indicates the initial risk and expected return associated with the transaction. It lies on a curve $U_A$ whose points have the same utility (are indifferent) from the standpoint of an economic agent X (hence the name "indifference curve"). As it is drawn, $U_A$ reflects risk aversion as a characteristic of the preferences of X: if a point on the curve is associated with a higher risk this must be compensated (for utility to remain constant) by a higher expected return. A special case is point *a*. The return measured by distance *Oa*, on the vertical axis is certain, since there is no dispersion at all around the mean, and X will consider it as equivalent to the expected return and risk associated with *A*, since points *a* and *A* are on the same indifference curve $U_A$. Thus *Oa* is the certainty equivalent of *A*. The expected return, indicated by *A*, is its distance from the horizontal axis and is thus also equal to *Ob*. We can see on Figure 2.2, that *Ob* is the sum of *Oa* (which, we saw, is the certainty equivalent of *A*) and a distance *ab*. The latter is the risk premium. Because he or she is a risk-averter, X will accept a degree of risk provided it is associated with a risk premium.

Now, suppose that the initial position is *A* but that some effort is made to reduce risk, in the common parlance sense of it: for instance, the probability that the other party defaults is reduced. Such effort will obviously reduce risk in the theoretical sense of the term. But it will also affect expected return. In what direction? The (average) gross revenue expected from the transaction will be higher but the effort itself will have a cost. As a consequence, it is difficult to say whether expected return, which is equal to expected gross revenue less the cost just identified, will increase or decrease. What we can say, however, is that the effort will be worthwhile if the new position *A'* lies on an indifference curve $U_{A'}$ which is higher than $U_A$. We know that *A'* will be to the left of *A* but we do not know whether it will be higher or lower, though this does not matter because any improvement will be reflected in an increase in the certainty equivalence of the transaction.

Risk-neutral decision-makers have indifference curves that are horizontal. By itself the reduction of risk in the theoretical sense of the term gives them no utility. Thus the reduction of risk (in the common parlance sense) is worthwhile only if it entails a higher rate of return. It is important to note this point because in many transactions at least one of the parties is risk-neutral. Thus individuals who borrow money from banks are often risk-averters but, in the context of each of the loan transactions with ordinary individuals (large corporate borrowers are another matter), banks, which can rely on the law of large numbers, are risk neutral. Nonetheless, as we all know, banks will be very concerned with reducing risk, in the common parlance sense of the term, attached to these transactions, because that will raise the expected return of those transactions (as a side effect, risk in the theoretical sense will be reduced as well but, for banks, this will be irrelevant).

Reduction of risk may often seem to be to the advantage of only one party. Insurance companies take a number of precautions against moral hazard or adverse selection, and banks against default. Does this not clearly generate additional costs in the form of red tape or constraints on behavior for their customers? In reality, because of competition and of the trade-off between expected return and security, less risk for one side of the market will typically result in a lower

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[9] Typically, the variance or its square root, the standard deviation.

price for the goods offered, which, in our example, means that customers also benefit from the reduction in risk. Moreover, in the case of many transactions, the parties involved are quite numerous and highly interdependent. The possibility of bad performance by one is a risk for all the others. For example, in construction, one contractor who is late is a serious problem for all; thus all have an interest in creating incentives that reduce the likelihood that this will happen.

*2.3. Alternatives to contractual security as factors of transaction security.*

Many factors can affect transaction security. These include general traits of the societies in which the transaction takes place, for instance whether the rule of law is acknowledged as a basic principle, institutions are organized democratically, powers are separated, crime is controlled, etc. Economic and social conditions are also important; for example, severe crises will endanger all existing arrangements. Disregarding all such traits, economists used to assume (as a rule implicitly) full respect of the terms of transactions. They relied on instant and costless enforcement by the judicial system of mutual obligations completely specified in contracts. Over the last decades, economists have become aware of the inadequacy of the assumption and the real world limitations and difficulties of achieving compliance. In many circumstances parties to a transaction do not rely on contracts and judicial enforcement but on other mechanisms. Economists are currently devoting considerable attention to these alternative mechanisms, all more or less falling into the category of "self-enforcing agreements".

We cannot describe here these mechanisms in any degree of detail, but we mention a number of ingredients that most of them possess to some degree. First there is the prospect of repeat interaction. If two parties know that they will interact closely and profitably in the future, this is normally sufficient to induce them to respect their mutual obligations. In many activities, repeat business or interaction is a major characteristic of the background against which transactions take place. This is true of vertical relations among firms, subcontracting, outsourcing, and procurement, but also of the relationship between an industrial firm and its bank, or between a car maker and its distributors. Second, a way to secure performance from the other parties is the payment of quasi-rents – that is, to simplify, of a premium over the price prevailing on the market. Bad performance will be sanctioned by the loss of the quasi-rent. The activities concerned can again be procurement, but also labor relations when governed by efficiency wages (that is, wages including a premium). Third, the party whose performance is in doubt can try to make itself more credible by engaging in a specific investment, such as a costly publicity campaign, which would clearly be lost in the case of an interruption of the particular activity. Fourth, as is well known reputation and trust may also play a large role in mitigating the risks involved in transactions that are not enforced by recourse to the judiciary. Associated with them, one can mention systems such as labels, certification, and endorsement operated on a commercial basis by third parties.

Many combinations of these various ingredients can be found in the real world and altogether their role in making transactions more secure is certainly as large as that of the classical contract and its enforcement. Our concern with legal variables such as bijural expertise leads us naturally to concentrate on contractual security, but it is important to keep these alternatives in mind so that the pursuit of contractual security is set in its proper economic perspective, which is one of competition among instruments. Often, relative cost will be an essential consideration. For transactions involving small stakes, recourse to the legal system will often prove too expensive and the parties will have to rely to a large degree on the self-enforcing mechanisms mentioned above – for

instance on the reputation of the seller, made operational by labels and certification, or on repeat business (as can be the case between consumers and their butchers). For transactions involving large stakes, costs will be much less relevant than the reliability of the various instruments. In this context, the resources offered by legal institutions will be an important consideration.

In general, factors of transaction security other than contractual security may, for our purpose, be considered as exogenous or given. That is, we will suppose that their existence and their characteristics influence contractual security – the way and the extent to which it is pursued – but we will allow no reverse causality. However, that resolve is not steadfast and may allow some exception. For instance, we will see that trust may not be independent of what is done at the contractual level.

*2.4. Contractual completeness as a factor of contractual security.*

As noted, contractual security can be pursued along two dimensions. The first one is the degree of contractual completeness. Even if we limit ourselves to economics, there are several definitions of contractual completeness (see, for example, Hart, 1987 and Schwartz, 1998). Here, completeness means that the contract, when it is signed by the parties, takes into account all the contingencies that may affect the gains and costs entailed by the transaction, and this for each party to that transaction. Contracts can hardly be fully complete in real life, but they can be more or less incomplete. *Ceteris paribus*, contract A is more incomplete than contract B if the signatories of A are more likely than the signatories of B of falling victims to events whose possibility had not been taken into account when the contract was signed.

This formulation is intended to allow for an important difference between contracts agreed upon in a common law setting and contracts entered into under civil law. To pursue contractual completeness, common law systems tend to rely on stipulating explicitly in the contract what should happen under as many contingencies as possible. For the same purpose, civil law systems tend to rely more, in an implicit way, on general principles – usually discoverable in the law (especially in codes) and enforced by the courts – such as the decisive effect of the intent of the parties, or the requirement for them to act in good faith. As a consequence, for the same degree of effective or *de facto* completeness, contracts tend to be longer, more detailed, and explicit under common law than they are under civil law systems.

When contracts, or the transactions underlying them, involve different legal traditions or systems, a good understanding of this difference between the two main systems, and of others of the same kind but more specific to the various sub-systems within the two main traditions, is a source of efficiency both in writing the contract and in explaining its significance to clients. For instance, for some types of transactions, a (formally or apparently) very incomplete contract may seem perfectly natural to lawyers educated in civil law systems, in which reliance on general principles and codes is standard practice. If it is one of these systems that will operate in the case of litigation, these lawyers may well insist that contracts be brief and, in that sense, incomplete. However, this may be quite puzzling to the other party if it is composed of clients and lawyers familiar only with a common law system. Whatever the solution ultimately adopted, the presence of lawyers possessing bijural competence is likely to be very productive in such circumstances.

The question must also be considered given the fact that in business law, the parties to an international transaction usually have some freedom to decide the forum (judicial system of one country, arbitration, etc.) in which any dispute settlement, should it prove necessary, would take place, and, in such circumstances, what law (that of a country, Lex Mercatoria, Unidroit, etc.) would be applied. Specifying such matters in the contract itself undoubtedly makes it more complete. Whether this is a good idea, and what forum and law to choose are questions with regard to which, again, bijural expertise might be very valuable. Even if considerations such as the relative power of the parties and the nationality of the law firms are likely to be decisive in many cases, the need remains of at least explaining to all concerned the  consequences of the decisions made. A bijural lawyer will be particularly apt to do this.

Should we expect contractual security to always increase with the degree of completeness of contracts? Or can completeness become, after some point, excessive or counter-productive (independently of the cost of producing it, which itself probably increases more and more rapidly)? There are serious reasons to presume that the idea of an excessive degree of completeness makes sense, which implies that, along that dimension, there will be an optimum (again independently of the production cost). Economic theory itself provides some reasons supporting the idea. One is related to a concern, among the parties to the contract, for sufficient robustness, that is for the capacity of the contract to play its role in a variety of circumstances. Unforeseen contingencies and economic change may create more problems in detailed and purportedly exhaustive contracts than they do in contracts that remain relatively brief and imprecise. In the first case, renegotiation of the terms of the contract will be needed, which may be most inconvenient in some circumstances. In the second case, whatever the legal system, parties will have to rely on interpretation by judges or arbitrators, which may be safer. Another reason is the possibly detrimental effect on trustworthiness of an excessive degree of detail and precision about obligations. A party whose day-to-day behavior is prescribed in too much detail might feel suspected and might be less inclined to prove trustworthy (Brousseau, 2001). However, customs or habits in this respect may vary a lot across legal traditions and systems, which again suggests an important role for bijuralism.

*2.5. Monosemy as a factor of contractual security.*

Non-ambiguity or "monosemy" is the second dimension along which contractual security can be pursued. By this, we mean that there is no misunderstanding among the parties to the contract about the legal meaning or significance of each term and stipulation inserted in the contract – either explicitly or implicitly (e.g., in civil law systems) referred to in the contract. For example, if a contract refers to *force majeure*, for the purpose of contractual security the legal meaning of that expression must be clear and identical to all the signatories of the contract. For a given degree of incompleteness in the sense given above, achieved for instance in common law systems by *N* clauses included in the contract, the degree of non-ambiguity can vary substantially (each of the clauses being more or less ambiguous or polysemic in the sense indicated here).

The risk of ambiguity in the sense of polysemy always exists. Reducing it requires effort, which in economic terms means the use of resources, that is the assumption of a cost. That risk, however, is much increased when contracting involves agents coming from different countries and legal systems, especially when some  agents are familiar with common law systems whereas the others are familiar with civil law systems. Reducing ambiguity then requires making much more explicit the legal meaning of each clause or use of terms in the contract. This will make the contract

longer, but more importantly it will require some skills. A first implication is that achieving the same level of non-ambiguity is likely to be much more costly and difficult in an international contract than it is in an internal one. A second implication, more significant for our purpose, is that reducing ambiguity in the way suggested here requires that at least some of the parties to the contract, or their legal advisors, have not only a sufficient knowledge of several legal systems, but more critically some know-how about coping simultaneously with different legal systems – which is precisely what bijural lawyers contribute.

For a given contract, increasing its degree of completeness and increasing its degree of monosemy are both sources of increased length. Up to a point, at least, they are also both factors of contractual security. Are they independent factors? It seems clear that mechanically, so to say, a greater degree of completeness, which takes the form of a number of new clauses, tends *ceteris paribus* to diminish average monosemy. To restore average monosemy, the terms used in the added sentences will have in turn to be explicated in detail. In the case of international contracts, this constitutes an additional reason to think that there is an optimal degree of completeness.

*2.6. Litigation and contractual security.*

A large part of the difficulty of transacting across national borders and/or legal systems is related not directly to the negotiation and the writing of contracts but to the way disputes are dealt with when they occur. For the parties to a contract, the availability of an efficient mechanism of dispute settlement is a major determinant of contractual security, on equal footing with the particulars of the contract itself. Arbitration and similar modes of conflict resolution have certainly changed very much the situation in this respect. Thanks to them, the features of dispute resolution are to a large extent endogenous to the legal relationship established or initiated in the contract, in the sense that the parties can agree over many features of the dispute resolution either in the contract itself or later, when the implementation problem emerges. However, there are limits to what the parties can agree on. To know these limits and to explain them to the parties to the contract is an important service rendered by lawyers and one in which some multijural knowledge is likely to prove particularly valuable. To the extent that voluntary or involuntary recourse is made to national systems rather than to arbitration, some knowledge of legal rules and procedures and, more importantly, of practices in place in a country inevitably foreign to some of the parties will be necessary. We include in the practices things like the time necessary to obtain a decision by courts, the honesty and competence of judges, the possibilities of appeal or of settlement out of court, and so on. The kind of knowledge that will be useful in these matters offers some indication about what multijural training should include: not only the law but also some familiarity with the practice of the law and its implementation as well as some quasi-sociological knowledge of the organization of the judiciary and of the legal profession in the different countries or legal systems concerned.

It must also be stressed that bijuralism or multijuralism as a human capital asset may also be of great value when litigation takes place entirely within an arbitration forum. That is because within arbitration very important differences continue to exist between practices inspired by common law and civil law approaches to litigation, or for that matter between approaches inspired by different systems within each of the two traditions. Arbitration tribunals typically borrow their practices from several systems, which is a serious potential source of discomfort for monojural lawyers and provides a comparative advantage to those trained multijurally. Examples of the areas in which differences are most important, as established by Julian Lew and Laurence Shore (1999), include

the examination of witnesses, the inquisitorial nature of tribunals, written pleas versus oral submissions, expert evidence, proof of foreign law, application of transnational commercial law, and the question of who pays the costs. To give two examples pertaining to the last item, Lew and Shore note that the principle of "losers pay", generally recognized in Europe including England, is foreign to American lawyers, whereas a "without prejudice" offer of settlement which is not accepted may have cost consequences for the receiving party in England but not in the United States and in civil law jurisdictions. It is clear that in the context of litigation the question of monosemy arises at least to the same degree as we argued it does in the contractual process itself.

*2.7. Law-making and other transformations of the legal environment.*

In all legal systems, the law evolves in part as a result of interpretations or constructions that aim principally at applying the existing law to practical cases. Thus some law-making is already implicitly included, as a side-effect or by-product, in the practically-oriented endeavors discussed so far. However, there are legal activities whose objectives pertain more directly to law-making. These activities may constitute a major outlet for multijural knowledge.

The latter proposition would be true even if there were no international transactions or transactions across legal systems, which allows us to disregard these transactions for a moment. For the proposition to be true, it is enough that information about some aspect of the law in country or legal system A "inspires" some change in the law in force in country or legal system B − generates "transfers" from one legal system to another. A number of such transfer processes or mechanisms can be identified. One of these, illustrated by the influence of the civil law systems of France and Germany on various parts of the legal system of a fully independent country such as Japan through the efforts of Japanese legal experts, may be termed a process of "acquisition". Another, characteristic of what happened in former colonies such as Canada, countries of Latin America, and the United States of America, is in the nature of a legal "transplant" as the conquerors' legal system is imposed in the colony (see Berkowitz, Pistor, and Richard, 2003). We mention finally the effect of competition between legal systems (Mattei, 1997 and Ogus, 2002), and that of coevolution (Breton and Des Ormeaux, 2004).

In these transfer processes, lawyers are involved in a central and even determining way. Who are these lawyers? Many are scholars (in the traditional jurisconsult role), making their influence felt by the way of books, articles, and, most importantly today, participation in committees and working groups. Judges, in particular those contributing (in civil law systems) to the production of general rules and interpretations (for example, members of the *Cour de Cassation* or the *Conseil d'Etat* in France) also play a major role in some areas. All ministerial departments – plus, in the case of Europe, the European Commission and the so-called Council of Ministers – contribute to the flow of new laws and regulations, which means that in all these administrations one finds a serious concern about what obtains elsewhere. And there is of course the same concern among all those, legislators and staff, who collaborate in the law-making machinery in parliaments.

For these transfer processes to exist at all, there must be, in aggregate terms, some minimal knowledge of "foreign" systems, or of solutions provided by foreign systems to problems perceived as shared or common. This feature of these transfer processes allows the depth and nature of the required knowledge to vary considerably across the individual actors or functions involved in each particular area. However, a relatively deep knowledge of several legal systems such as provided by

bijuralism seems highly valuable for the purpose of avoiding misrepresentations of clauses or solutions separated from the legal context or culture in which they are embedded. It is thus essential that a sufficient number of participants in the comparative exercise and transfer processes have this kind of deeper training or know-how.

As mentioned, the experience of the European Union may be interesting on these matters. As a consequence of the way decisions are made, representatives of specialized departments in the various member countries are compelled to work together over extended periods of time – and also to work together, in general, with their specialized counterparts within the European Commission. A lot of information about each country's legal and regulatory arrangements are thus transmitted to, or acquired by, nationals of other countries in an informal way, and therefore substantial multijural knowledge, albeit of a specialized kind, is generated. More deliberately, multijural knowledge is both acquired and produced in the setting of the various schemes, undertakings or organizations, such as the Lando Commission or Unidroit, whose purpose is to harmonize or unify some segments of private law.

As suggested in Figure 2.1, the influence of multijural or comparative law knowledge on law-making, as well as the more direct undertakings at harmonizing it, have an effect on the legal environment in which contractual security is sought, and thus ultimately on contractual security itself. Law-makers have many concerns that have nothing or little to do with contractual security – for example, social justice or tax revenues. However, they also pursue economic efficiency. We have seen that increasing the contractual security of a transaction is beneficial to all the parties to the transaction, which justifies the presumption that it is also economically efficient from the perspective of governments and as such kept in mind when designing the law. In other words, even if it cannot be assumed to be true in all circumstances, the presumption seems justified that the influence of legal transfers or of legal efforts at harmonization, and, underlying that, the implied employment of multijural know-how, constitute on the whole a positive contribution to contractual security.

### III. The Derived Demand for Bijural Services

*3.1. Some preliminary observations*

To avoid undue repetition, we take as given in this section that what is sought by parties desirous to exploit profitable opportunities is transaction security and that this is obtained through contractual security as explained in the last section. This section is consequently devoted to an analysis of the origin of the demand for bijural services or bijural competence as that demand is derived from the demand for contractual security. The matter can be put differently. In the tool-box of economics, one finds, under the heading of "derived demand", a set of propositions that can help us understand where the demand for a factor of production comes from and how that demand varies with changes in a number of significant variables.

We begin by a recognition that contractual security, itself a factor of production, is produced by a number of inputs including, among many, bijural services, monosemy, and some degree of contractual completeness. Recall from the discussion of the last section that the demand for transaction security is also a demand for a factor input and is also generated by a production function in which contractual security and other variables introduced in that section (the size of

stakes, the repeat or non-repeat character of transactions, etc.) enter. It follows that the demand for bijural services or bijural competence is, *ceteris paribus*, derived from a demand for contractual security which is, in turn, derived from a demand for transaction security.[10]

## 3.2.  The meaning of derived demand

The theory of demand – as in the statement that it is all a matter of supply and demand – is concerned with the value that consuming individuals and households (families) place on "final" products or commodities, on the goods and services from which they receive satisfaction or, in the language of economics, utility. The (diagrammatic) demand curve or (mathematical) demand function for a commodity is a relationship between the quantity demanded of that commodity, its own price, the prices of its substitutes and complements, the income of the individuals or households, their preferences, and other generally less significant variables. The demand for factor inputs is *derived* from this underlying demand curve or function for utility-generating final goods and services.

It is sometimes said that under competitive conditions in factor and product markets the income of a given factor of production – henceforth, bijural lawyers – is determined by its marginal product (what that factor adds to the quantity and value of some final utility-generating commodity). This amounts to saying that the income of bijural lawyers is determined solely by the demand for their services: an ambiguous and possibly misleading proposition. Even though it is true that in equilibrium the income of bijural lawyers and the value of their marginal product are equal, the theory of derived demand shows in an explicit way how income is determined by both the supply of, and the demand for, bijural services.

This point is important because it tells us that to analyse how the price of any one given factor of production changes, one must focus on supply and demand curves and, most importantly, on what determines the shape of these curves. This is necessary to answer questions such as the following: a) by how much are the incomes of bijural lawyers likely to fall as the supply of such lawyers increases; b) what determines the power of a professional association to raise the incomes of its members by reducing supply by (say) raising entrance requirements. The answer to these questions and to others like them depends crucially on the size of the elasticity of the demand for factor inputs.[11]

## 3.3.  The concept of elasticity: a brief digression

For the theory of derived demand to be productive of valuable analytical results, we need to make use of the concept of elasticity and to understand how it applies in specific contexts. We focus on two of these as particularly important for our purpose: one concerns the effect of a change in price on the quantity demanded of a commodity (contractual security, for example) or of a factor of production (bijural lawyers, let us say); the other pertains to the use that will be made of bijural lawyers compared to (say) a group of monojural lawyers when the price of the first relative to the second rises (or falls).

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[10] We discuss and examine the influence of the *ceteris paribus* variables in section V and VI.
[11] We have not attempted to collect the data necessary to estimate empirically the magnitude of these elasticities.

We begin by defining what is meant by the elasticity of demand for a commodity (contractual security). To simplify the presentation we limit ourselves to that concept because the definition and analysis that follow apply *mutatis mutandis* to the demand for a factor of production (bijural lawyers) and to the supply of commodities and factors in a straightforward fashion. We noted earlier that a demand curve is a relationship between the quantity demanded of a commodity and its price as well as other variables such as the prices of substitutes and complements, the income of demanders, and so on. We now take note that, in general, the lower the price of the commodity, the greater the quantity of it demanded. In other words, demand relationships are negative. The questions that naturally follows is: by how much will the amount demanded increase for a given reduction in price.

To answer this question, we must acknowledge that the dimensions in which economic variables are quoted are arbitrary. One could, for example, say that sugar is 10 euros a kilo or 1 centime a gram. The notion of elasticity has been devised to avoid this and other types of dimensional arbitrariness. Elasticity is defined as the relative change in the quantity demanded over (divided by) the corresponding relative change in price. So, if the elasticity of demand for a commodity is − 0.75 (a minus sign signals that the demand relationship is negative − at higher prices *less* is demanded)[12] and the price falls by 5 percent, the quantity demanded of the commodity will increase by ( − 0.75 × − 5 = ) 3.75 percent.[13]

The second context refers to production. If a production process uses more than one factor input, a change in the price of one factor relative to that of the others will generally induce substitution among factors − an increase in the use of one and a decrease in the use of the others. For example, if contractual security is produced with bijural lawyers and some other input, an increase in the price of bijural lawyers will lead to a reduction in the use of these lawyers and an increase in the use of the other input. The size of the response to the price increase is called the elasticity of substitution.

It is useful to keep the three following points in mind: a) elasticities are abstract numbers (they have no dimension), therefore the elasticities of demand for various commodities can be compared; b) the effect of a price change on demand is always computed at a given point on the demand curve − in general, the elasticity will be different at different points on the curve; c) if the elasticity of demand is equal to −1, it is called *unitary*; if it is greater than −1, let us say −2, the demand is said to be *elastic*; and if the elasticity is numerically less than −1, for example −0.5, the demand is *inelastic*.

### 3.4. *Principles of derived demand and their application to bijuralism*

We will devote our attention in this subsection to an understanding of the behavior of the own-price elasticity of demand for a particular factor of production, namely bijural services, at the level of the whole of the bijuralism "industry", with occasional remarks regarding what happens within law firms taken one at a time. In other words, we will try to answer questions like the following: if the elasticity of the demand for contractual security is −1.5 (that is, an increase in the cost of

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[12] Supply relationships are positive − the higher the price the greater the quantities placed on the market − so the elasticity will also be positive (a plus sign).
[13] Elasticity can also (and equivalently) be defined as the percentage change in quantity demanded to the corresponding percentage change in price.

contractual security equal to 10 percent will reduce the demand for that commodity by 15 percent), what will the elasticity of the demand for bijural services be equal to? Or, if the cost of bijural lawyers compared to that of monojural lawyers is a small part of the total cost of producing contractual security, should we expect the elasticity of the demand for bijural lawyers to be large or small?

In *Principles of Economics* (1890/1952, pp. 385-386), Alfred Marshall formulated four principles to help us answer questions such as the above. In the years following the publication of this book, economists have clarified and amended these principles.[14] There is now general agreement on what they mean and how they should be used. We will simply formulate the principles and, for each one of them, look at their implications for the demand for bijural lawyers.[15]

PRINCIPLE 1:
*The elasticity of demand for bijural lawyers will be smaller, the smaller the elasticity of demand for contractual security.*

Let us begin with the second part of this principle. If the elasticity of demand for contractual security is small, let us say equal to − 0.2, a 10 percent increase in the cost (price) of contractual security will lead to a small reduction in the quantity purchased of that service, in the present numerical example to a 2 percent reduction. The small reduction in the demand for contractual security will lead to a small loss in the employment of bijural lawyers. One implication of this result is that, *ceteris paribus*, the demand for bijural services at the level of the *law firm* will be more elastic than the demand for these services at the industry level. This follows from the fact that the demand curves facing individual law firms are highly elastic because the services of law firm X is a very close substitute for the services of law firm Y. Compared to price increases at the level of the firm, however, price increases at the industry level will not have a large effect on the demand for bijural lawyers because there are fewer substitutes for bijural services.

Another implication of Principle 1 is that if the elasticity of demand for contractual security is larger in the long than in the short run, so will the elasticity of demand for bijural services. The reason for this is simply that there are likely to be more and better substitutes for the services of bijural lawyers with the passage of time.

PRINCIPLE 2:
*The elasticity of demand for bijural lawyers will be smaller, the smaller the elasticity of substitution between bijural lawyers and other factors of production needed to produce contractual security. Put differently, if bijural lawyers are an essential factor − are necessary − in the production of contractual security, the elasticity of demand for bijural lawyers will be small.*

The principle is intuitively obvious. If the elasticity of substitution is equal to zero − that is, bijural lawyers are absolutely essential for the production of contractual security − the elasticity of demand for bijural lawyers will also be equal to zero and any increase in the price of contractual security will lead to a proportional increase in the incomes of bijural lawyers. When the elasticity of substitution is greater than zero, an increase in the price of bijural services will reduce the demand for these services − increase the demand for other factor inputs whose prices have not

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[14] In particular, Hicks (1932/1963, pp. 242-246).
[15] The order of presentation of the principles is arbitrary.

changed – and mitigate any increase in the incomes of bijural lawyers. Any factor of production is likely to be more essential – the elasticity of substitution smaller – in the short run than in the long run. In the longer term, when adjustments have had time to take place, an increase in the price of bijural services will lead to a substitution of (a replacement by) other factors of production for bijural lawyers – for example, by the coordinated activity of monojural lawyers – both directly in the production of contractual security and indirectly in consumption as the increased price of contractual security will induce traders to resort to alternative means of obtaining transaction security.

PRINCIPLE 3:
*The elasticity of demand for bijural lawyers will be smaller, the smaller the share of bijural services in the total cost of producing contractual security.*

This third principle of derived demand is sometimes referred to as "the importance of being unimportant". Let us consider a simple example before applying the principle to bijural services. For a house whose market price is 200,000 euros, assume that the cost of doorbells is, say, 50 euros. Should the price of this factor triple to 150 euros, the price of the house would increase to 200,100 or by 0.0005 percent. Few people are likely to be discouraged from buying the house by such an increase; the demand for doorbells will be quite inelastic.[16] Applied to bijural services, the principle says that if the costs of these services are only a small part of the total costs of generating contractual security, an even large increase in these costs would add only a small percentage to the expenses of producing contractual security and would therefore reduce demand by a small amount.

However, for this principle to hold, it is necessary that the elasticity of demand for contractual security be larger than the elasticity of substitution between bijural lawyers and other factor inputs used to produce contractual security.[17] Let us return to the housing example and instead of doorbells, consider, say, carpeting (or a factor input that is significantly more costly than doorbells), and assume a doubling of its price. Assume also that this increase does induce consumers to look for houses with a different type of flooring – that the elasticity of demand for carpeted houses is relatively large – and that the elasticity of substitution of carpets for other factors is small, then the principle holds. In the case of bijural lawyers, it is important to be unimportant only when traders can replace contractual security in producing transaction security more easily than the producers of contractual security can replace bijural lawyers. Put still differently, only when bijural services are more essential in producing contractual security than contractual security is in producing transaction security will the importance of being unimportant be operative. There is therefore a kinship of sorts between principles 2 and 3.

PRINCIPLE 4:
*The demand for bijural lawyers will be less elastic, the less elastic is the supply of other services used in the production of contractual security.*

Suppose that, as the price of bijural services increases, those seeking contractual security try to replace bijural lawyers by alternative sources of security. Suppose also that their bidding for these alternative sources leads to a substantial increase in their prices because the elasticity of their

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[16] This example, modified and expanded, is taken from Stigler (1987, p. 254).
[17] It is this requirement that eluded Marshall and was provided by Hicks.

supply is small. This would limit the substitution of bijural services for the alternative sources of contractual security. The demand for bijural lawyers would be inelastic.

## IV. The Supply of Bijural Services

### 4.1. *The problem outlined*

This section is concerned with the supply of bijural services. It focuses on the occupational choices of individuals, on the influence of a limited number of variables on these choices, and on the means of implementing the choices. The analysis is restricted to aggregate patterns and consequently neglects much of the trials and errors, the difficulties, and the uncertainties that characterize these individual occupational decisions. At the same time, the framework we borrow – that of neo-classical economics – will make it possible for us and for those who would wish to amplify and elaborate on our discussion to incorporate in the analysis the influence of cultural, social, and other factors.

The sequence of events in any individual's decisions regarding the choice of an occupation is so complicated that an ordering of these events will almost inevitably appear to be artificial. Still, if one is to try to understand what is going on, an ordering is required. The one we adopt will also serve to organize the discussion of the section. We suppose that based on their preferences and a number of factors to be examined, individuals first make a decision regarding the occupation they want for themselves. That choice being made, individuals decide on what are essentially the investments that will make it possible to realize the occupational choices decided upon. For example, a person decides first to become a lawyer, possibly even a bijural lawyer, on the basis of his or her preferences and external variables such as expected income, hours of work, and so on, and then decides to register in a school of law to acquire a knowledge of the law. The second decision, though inextricably related to the first, can and must be separated from it for analytical purposes.

### 4.2. *The occupational decision*

We must first make an assumption regarding the value or index which individuals seek to maximize.[18] That assumption, in turn, makes sense only if two supplementary suppositions are made.

Some models of occupational choice and a very large volume of popular discussions on the subject are based explicitly or, more often, implicitly on the assumption that in deciding on occupations or jobs individuals seek to maximize income. There are at least two implications of this assumption which are difficult to accept. A first pertains to individual decision processes and the second to adjustments in labor markets.

To assume that individuals maximize income is to suppose that their choices are not influenced by other aspects of occupations besides the stream of income they generate. As we shall shortly see, these restrictions are unacceptable. Secondly, if individuals maximize incomes, competition in

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[18] There is, of course, the question of whether individuals maximize or not. This is not a question we seek to answer or even wish to address. Our objective is to make use of microeconomic theory to shed light on issues related to bijuralism. That theory is, for better or for worse, based on the assumption that individual behavior can be modelled by supposing that it reflects efforts on the part of individuals to maximize an index or another – often utility.

labor markets would equalize incomes for the same qualifications – an outcome which we do not observe. We must therefore adopt a different conception of behavior.

We will assume that individuals, in making occupational decisions, maximize utility and that utility is a function of income and of a number of other essentially non-monetary factors, though many of these have monetary equivalents. As we shall discover, the assumption is not only richer in itself, it also matches real world individual decision-making and labor market adjustments more closely than the alternative.

If the assumption is to be logically defensible, it must be the case that, first, individuals are informed about a variety of occupations and their characteristics and, second, that they are "mobile" enough to effect the desired choice. The availability of information and the capacity to move to the desired occupation are necessary conditions for the maximization-of-income hypothesis also, but the requirements – at least that pertaining to information – are more stringent for the maximization-of-utility hypothesis.

To simplify presentation, suppose that there are two occupations only: *A* and *B*. *A* yields a stream of income per year over some time horizon whose present value, in euros, is $Y_a$, while for *B* the present value, again in euros, is $Y_b$, with $Y_a > Y_b$.[19] Let us now assume that an individual chooses the occupation yielding $Y_b$. Is that person maximizing? The answer is that he or she can be maximizing if the value of the difference between $Y_a$ and $Y_b$ is inferior or equal to the difference in the values (measured in the same units) which the individual places on one or more non-monetary characteristics of the two occupations. The idea was known to Adam Smith who identified five "principal circumstances which … make up for a small pecuniary gain in some employments, and counter-balance a great one in others" (Smith, 1776/1937, p. 100). These "circumstances" were later enshrined in Labor Economics under the heading of "compensating differentials" or "compensating differences" and are an integral part of the economics of labor supply. They can be thought of as the price paid by the suppliers of labor (equal to the difference between $Y_a$ and $Y_b$) for the non-monetary characteristic(s) of the occupation.

Compensating differentials take a variety of forms. Smith identified five, some of which may not be very important for the choice of a profession such as law or a particular professional specialization. He mentioned: "first, the agreeableness or disagreeableness of the employments themselves; secondly, the easiness and cheapness, or the difficulty and expence of learning them; thirdly, the constancy or inconstancy of employment in them; fourthly, the small or great trust which must be reposed in those who exercise them; and fifthly, the probability or improbability of success in them." (Smith, 1776/1937, p. 100).

Some people like repetitiveness, others are repulsed by it; some like to make decisions, others shy away from responsibilities; some like the specialization that comes with bureaucratization, others cannot stand life in bureaucracies; some like particular physical or geographical locations, others are indifferent about them; some like to travel abroad, others prefer to be sedentary; some want to live among relatives and friends, others are unconcerned about the matter. The list could be extended almost without end. The point is simply that if people put a value on any one of these

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[19] The present value of a stream of euros is the value that the stream takes when each unit of the stream (the unit wage rate − say $w_a$ for occupation *A*) is discounted using each period's discount (or interest) rate and these discounted values are summed.

characteristics of occupations, they will be willing to receive lower monetary incomes in payment for them.

To obtain the supply curve for any occupation, we simply rank individuals in ascending order of their compensating differentials. The array of the ascending supply prices (the prices that induce supply) is the supply curve. In other words, if an individual "likes" a particular occupation, he or she will enter it at a "low" supply price. As that price rises, people who "like" the occupation less will seek employment in it. It follows that the more individuals differ in their preferences, the more inelastic the supply curve – the more the supply price will have to rise to attract more people.

More formally, let us assume that the unit wage in occupation $A$ is $w_a$ and in $B$, $w_b$. Let us also assume that the absolute differential that a person needs to choose $A$ is always a fraction $k$ of $w_b$: $k$ is therefore the proportional compensating differential. Thus, an individual chooses $A$ if

$$w_a - w_b / w_b > k$$
or
$$w_a / w_b > 1 + k$$

As $w_a$ rises relative to $w_b$, the number of persons entering $A$ ($N_a$) rises. If supply is completely elastic – the supply curve is completely horizontal – the marginal person's compensating differential is the same as everyone else's (there are no differences in preferences), and his or her influence on equilibrium compensating differential is nil. However, if there are differences in the preferences of people in that market, the supply curve will be somewhat inelastic as in Figure 4.1.

*[Figure 4.1 goes about here]*

In that diagram, the supply curve (S-curve) is drawn on the assumption that there are individuals in the market for bijural services who are willing to work for a unit price of $x$ – their $k$ is equal to $(1 - x)$. The length of the *horizontal* line-segments that begin at $x$ is a measure of the number of persons entering the market. Given the position of the demand curve, it is clear that the unit price of bijural services will have to rise to attract more bijural lawyers. By how much? By an amount that is sufficiently large to attract one or more additional bijural lawyers. The length of the *vertical* line-segments is a measure of the required price increase. That process will continue until demand is satisfied – until point E is reached.

The compensating differentials we observe in labor *markets* are therefore determined by the interaction of supply with demand. Given that the supply curve is constructed by ranking individuals using the supply prices that lure them in an occupation, the equilibrium market compensating differential in any occupation that will be reflected in labor market prices (wage rates) and in labor incomes is determined by the marginal individual – the one thanks to whom supply and demand are made equal. In other words, the marginal person's compensating differential becomes the market compensating differential where the demand curve intersects the supply curve – point E in the diagram. Labor markets therefore reflect these compensating differentials, in the sense that equilibrium incomes will reflect the value people place on repetitiveness, on making decisions, on specialization, etc. or their opposites. In making statistical comparisons of the incomes of different groups of lawyers (say), it is important that the compensating differentials that are salient enough to be reflected in market data be incorporated in the analysis. Otherwise, one is implicitly assuming that individuals are maximizing income and not utility.

It should be noted that when the supply curve is inelastic as in Figure 4.1, many individuals in any given occupation – all the infra-marginal persons – will be earning rents, rewards that play no allocative function. Figure 4.1 provides us with a measure of these rents: the area (akin to a triangle) above the $x$E curve up to the horizontal line passing through E is a measure of the rents accruing to the first entrants in the market. Those that enter at $(w_a/w_b)^*$ get no rents.

*4.3. The investment decision*

As noted earlier, we have ordered the career choices of individuals in a sequence in which there is first an occupational choice followed by a decision regarding the means that have to be acquired to implement that first choice. The second decision is assumed to be one about investing in human capital.

The concept of human capital is as old as Adam Smith's *Wealth of Nations* (see Smith, 1776/1937, p. 101). Though occasionally used in the years that followed (see Walsh, 1935; Friedman and Kuznets, 1945), the concept acquired prominence in the last forty years (see Schultz, 1961 and 1962; Becker, 1964; Mincer, 1970; Coleman, 1990) as a major explanatory variable for such phenomena as the behavior of the productivity of farm output, observed variations in rates of economic growth between countries and regions, the economic value of schooling, and the distribution of incomes.

Physical or non-human capital is the *stock* of machines, roads, bridges, buildings, and so on which are a contributing source to today's and tomorrow's *flows* of output and income. The flows, on a per-period basis, measure the yield or return on the capital. Investments are increments in the stock of capital. In a closed economy, investments are possible if the flow of consumption is less than the flow of income produced in a given period. Because of this, non-human capital is at once the sum of past and current investments in machines, roads, bridges, buildings, et cetera, and the accumulated stock of produced means of production. In like fashion, human capital is the *stock* of skills, physical and mental health, knowledge, and so on which are *a contributing source to a person's earning power today and tomorrow*. Growth in the stock of human capital is also the result of investments of resources in that form of capital.

As with physical capital, in a closed economy growth in human capital is possible if current consumption is less than current actual and potential income. As with physical capital, human capital is the accumulated stock of produced means of production. For example, the health parents transmit to their children is, for the children, inherited human capital. The children can possibly better their health – accumulate more of that form of human capital – by allocating resources (better diets,[20] preventive care – immunizations, mammograms, colonoscopies, etc. – exercise, abstention from smoking, etc.) to that end. When that happens the accumulated stock of produced human means of production increases. In other words, unless resources – goods and services, time, mental and physical energy, and so on – are withdrawn from the flow of current consumption, including the current consumption of leisure, and allocated to improvements in skills, health, knowledge, and other kinds of human capital, in a closed economy there is no investment in that form of capital. If the acquisition of knowledge of more than one legal system requires the use of resources – tuition

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[20]More healthy diets may be less expensive than diets that are "unhealthy", in which case physical (monetary) resources are economized. However, the changeover from one sort of diet to the other may be costly in psychic (non-monetary) resources. Reduced to comparable present value dimensions a "better" diet may or may not save resources.

fees, textbooks and, of central importance, time not allocated to other valuable activities (including leisure) – that knowledge is a particular form of human capital.

Before examining what determines the yield on bijuralism as well as some of the other factors that help determine why lawyers and students of law invest (or do not invest) in that type of knowledge, it is important to stress a point which is sometimes given short shrift in discussions of human capital. Ownership of a physical asset (a house or a car, for example) or of a title to a physical asset (a share of stock) usually confers a right to sell or otherwise dispose of the asset. That property or ownership right confers a value to the asset which it would not otherwise have. Ownership of a human capital asset does not usually confer the right to sell the asset. (References to slavery and indentured contracts in which human capital is effectively sold are misleading because neither of these transactions in human capital are respectful of the fundamental liberty of exchange and contract essential to a meaningful attribution of value to ownership). Ownership of human capital confers the right to, as it were, "rent" the assets – that is, to make them available to another person, to a firm, and/or a government for a price per time period. Other things being equal, this means that, in equilibrium, the marginal yield on the equivalent of a dollar invested in human capital will be higher than the observable marginal yield on a dollar placed in physical capital simply because the ability to dispose of an asset at will or to use it as collateral, even though unobservable, do give it value.

To simplify the presentation, we assume that a typical individual's occupational choice is to be a bijural lawyer. We further assume that investments in human capital and therefore in knowledge of different legal systems are governed, among other things, by the net yield or the net rate of return on these investments. We therefore look at some of the factors that help determine the net yield (gross yield minus unit investment costs) on bijuralism.

We begin by looking at the private yield to knowledge of a second, third, or fourth legal system, without distinguishing between types of human capital.[21] Then we look at how this knowledge is acquired. After that, we look at investments in general and in specific human capital. We pay no attention to the fact that human capital may have a social yield (necessarily larger than the private yield) as this variable will not affect individual decisions.

Legal concepts are incarnated in legal systems and these are vested in particular cultures and languages. Within a given homogeneous and relatively closed society, it is possible for the application of legal concepts to be unambiguous or monosemic – they will, in most instances, have the same meaning for all parties to a particular transaction. In more complex and open societies, and across cultural and linguistic frontiers, the application of the same concepts is likely to be more ambiguous. A person trained in two legal traditions will have an advantage that one trained in only one tradition will lack. That person, to put it differently, will have the means to cut across ambiguities or even obscurities that are the consequence of an incarnation in a legal system and in a particular cultural and linguistic background, and provide a more precise  interpretation of the legal concepts. The advantage is not the same but is analogous to that, often noted, possessed by a bilingual person who, in the act of translating a text, for example, is able to elucidate the meaning of propositions which in the original are unclear simply by transposing them in a different language.

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[21] To simplify the presentation, in the remainder of this section we refer to second legal systems only. Nothing is lost by restricting the presentation in this way.

The private yield on bijuralism is then the consequence of a better application of legal concepts to particular cases. Those who benefit from these superior applications – individuals, firms, organizations, governments – will share the benefits with the source – the lawyer or law firms – exactly like the gains from trade in ordinary goods and services markets are shared between the buyers and the sellers. The sharing depends on the structure of markets – whether they are competitive, oligopolistic, or monopolistic – and on the elasticities of supply and demand relationships.

The yield on the knowledge embodied in these lawyers and firms will be greater if lawyers and law firms in societies in which a single legal tradition rules discover that they need persons trained in the other tradition, because bijurals are able, with greater ease, to go from one legal system to the other. To understand how the underlying economic mechanism functions, imagine a transaction that requires knowledge of both civil and common law.

The law firm − or in-house bureau − responsible for the legal aspects of the transaction must decide, if it has (say) only common law personnel, to either hire a civil law lawyer or a lawyer that knows both legal systems. Assuming all other things are equal, it must be that the bijural lawyer is more costly to hire simply because the volume of additional human capital invested in that lawyer is larger. The training of the bijural lawyer has taken, let us say, one more year in law school than would have been the case had only one legal system been learnt. The earnings foregone and the extra out-of-pocket expenses incurred during that year are a measure of the additional cost of becoming bijural.

The law firm will hire the bijural lawyer if and only if it expects the value of the flow of transactions over time requiring knowledge of the two legal traditions to be sufficiently large to cover the extra cost of the bijural lawyer. If the value of that flow of transactions – properly discounted – is not large enough to cover the extra cost, a civil law lawyer will be hired. It should be noted that to the cost of the civil law lawyer, one must add the cost of coordinating the work of at least two and possibly more lawyers of different legal traditions. As a consequence, the value of the stream of expected transactions that has to accrue to the law firm (or bureau) to hire the bijural lawyer will vary (inversely) with the size of coordination costs.

We conclude that, *ceteris paribus*, if the yield is sufficiently high, lawyers will choose to become bijural. There are two broad avenues that can be traveled to achieve that end: through schooling and through on-the-job training or on-the-job experience. In general schooling will be followed by a period of on-the-job training (they are complements), but it is possible to acquire knowledge by relying exclusively on the latter. For example, a lawyer schooled in common law can spend time practicing law in a law firm whose main orientation is civil law. Or a civil law lawyer can work with common law lawyers. To a degree, schooling and on-the-job training are substitutes. In many cases, the same degree of bijural competence can be achieved by "shortening" formal schooling and "lengthening" on-the-job training or by the reverse.

Knowledge can be general or specific. It is general when it can be used equally efficiently in one context or another – when, to put it differently, it increases the productivity of the person who possesses it irrespective of context or venue. Knowledge is specific when it increases the

productivity of its owner only in particular situations. Most knowledge is neither completely general nor completely specific. Notwithstanding that fact, the distinction is useful.

We should expect the private yield on bijuralism to be higher when the knowledge of the two legal systems is more directly applicable to particular situations or contexts (say, patents and copyrights) – that is, when it is more specific. Why? To see that this must be the case, it is sufficient to take note of the fact that the value of the investment will fall – there will be a capital loss – whenever the specific knowledge cannot be applied to the specific context. Law firms that want to hire bijural lawyers whose knowledge is specific to these firms' transactions will have to pay more because those lawyers come with knowledge to which a particular risk of capital loss is attached. The increment in pay is in the way of an insurance premium against the risk of loss.

### V. Market Adjustments

In the next section, we will describe and analyse the effect of a number of external (exogenous) shocks or disturbances on the derived demand for bijural lawyers that lead to increases or to reductions in the market demand for these lawyers. These increases and reductions will, in turn, call for adjustments in the market for bijural lawyers and in related markets. It is therefore important to have a good grasp of some of the different ways markets adjust.

In the following subsection, we look at the forces at work in the analysis of market adjustments in the simplest model of conventional microeconomic theory. Then, in the following subsection, we analyse market adjustments when the change in the demand for bijural lawyers is static – when it is a once and for all change that is deemed by all market participants to be a permanent one, and expectations about price changes are inelastic, that is, the new ruling price is assumed to persist. (We look briefly at one exception to inelastic expectation). Lastly, we look at market adjustments when the change in demand is dynamic – the increase or reduction in demand is continuous for a significant period of time.

Some readers may be tempted to judge the next three subsections as being only of theoretical interest and not particularly relevant for an economic understanding of bijuralism. That temptation should be resisted. The approach we are suggesting for an understanding of bijuralism has many dimensions (see Figure 2.1), virtually all of which have a market counterpart. Markets adjust differently and at different speeds. A tolerably complete economic understanding of bijuralism requires that the phenomenon be appraised only when all markets are in equilibrium. If one is not aware of the idiosyncrasies of adjustment in different sorts of markets, it is easy to engage in meaningless and counter-productive comparisons and to advance erroneous conclusions.

#### 5.1. *The road to equilibrium*

There are two issues to be discussed in this subsection. The first pertains to the assumptions needed to insure that a market which is out of equilibrium will, in most instances, go to equilibrium.[22] The second relates to the speed of adjustment to equilibrium, that is to the time needed to go to equilibrium.

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[22] In the next subsection, we note a circumstance under which a market may, in theory at least, "explode".

From a theoretical point of view, a market for any one good or service is the aggregate of all individual demand and supply curves over the relevant market area.[23] For a number of reasons, the aggregate demand curves slope downward and the supply curves, in general, slope upward. Given that the aggregation is made over the same array of prices and over the same quantities (sold and purchased), demand and supply curves necessarily intersect. Equilibrium in any particular market obtains at the point of intersection of the demand and supply corresponding to a situation where supply and demand prices are equal. At equilibrium, the market clears in the sense that buyers purchase the whole of what sellers offer at that price.

If, in a given market at a given time, the ruling price is, let us say, below the equilibrium market-clearing price, the quantity demanded by buyers will be greater than the quantity supplied by sellers – there is a *shortage* of that particular good or service. In the contrary case, when the ruling price is above the equilibrium price, there is a *glut* in the market. Shortages and gluts will set in motion forces that will move markets to equilibrium. These forces are summarized in the following three theoretical propositions (or assumptions): a) when demand exceeds supply (there are shortages), prices will rise; b) when supply exceeds demand (there are gluts), prices will fall; and c) when demand equals supply, prices will remain unchanged. These conditions are in general sufficient to guarantee market clearance.

Some markets move to equilibrium rapidly, while others go there slowly. The evidence is that securities and other financial markets move to equilibrium so rapidly that what could be called the reaction speed to excess demand or excess supply is close to infinity. The evidence also suggests that in the market for professionals – mono and bijural lawyers among them – the reaction speed is low. That speed, in any market, is largely determined by institutional arrangements, in particular those that control the rapidity with which the information needed to make decisions becomes generally available throughout the market (or a significant fraction of the market) and those that control the time needed to carry out the decisions after the information has become available.

Consider the market for bijural lawyers. Suppose that the demand for their services increases consequent, let us say, on an increased need for contractual security in a particular domain of activity. One factor, part of accepted wisdom, is that the reaction speed in curtailing a shortage is the size of the excess demand created by the increased demand. Among other factors, one may note the belief that will form in the market regarding the permanency of the increase in demand. For example, if actual and potential market participants believe that the increase in demand could possibly be temporary, the reaction speed will be low. If, on the contrary, the market rapidly comes to the belief that the increase in demand is permanent, the reaction speed will be greater. The beliefs or expectations about the degree of permanence of the increase in demand will, in turn, depend, to a considerable degree, on the information that is available in the market.

But that is not all. The time needed to become a bijural lawyer must be considered. Suppose that with an additional year of study, a monojural lawyer becomes bijural. The minimum time, *ceteris paribus*, for the shortage to be erased will be one year. However, in the present example, nothing has happened to the demand for monojural lawyers – there is no change in the volume demanded. The increase in the number of bijural lawyers cannot be assumed to come from the existing stock of monojurals – more individuals will have to become lawyers and bijural, so that the minimum time needed to eliminate the shortage of bijurals will be longer than one year. It could be

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[23] Defining a market area is a difficult problem (see Stigler and Sherwin, 1985).

as long, *ceteris paribus*, as the number of years needed to convert raw human resources into bijural lawyers.[24]

## 5.2. Adjustments to static changes

Let us suppose that the market for bijural services (bijural lawyers) is in equilibrium – that is, the price for these services is such that the quantities supplied are equal to the quantities demanded. Now, let us assume that as a result of an external shock – an increase in the demand for contractual security following the appearance of a new form of exchange corruption – there is a once and for all increase in the demand for bijural services. In Figure 5.1, that is represented as a shift in the demand curve from D to D'. We will also assume that even if the demand for bijural services has increased, substitutes for these services remain generally available insuring that the post-demand curve is as elastic as the pre-demand curve. Finally, regarding the structure of the market, we assume that suppliers of bijural services react thoughtfully and prudently to price changes. This insures that the elasticity of supply is relatively small.[25]

Adjustments in a market that is organized on the basis of the foregoing assumptions will depend on the expectations of suppliers regarding the behavior of the price of bijural services. We can look briefly at three cases: naïve (or inelastic) expectations, adaptive expectations, and rational expectations.

Expectations are naïve when actual and potential suppliers believe that a given ruling price will persist. So, if there is an increase in the demand for bijural services and their price goes up from, let us say, $Y_0$ to $Y'$ (see Figure 5.1) at the intersection of D' and the current supply of $N_0$ and suppliers hold to the view that $Y'$ is here to stay, then expectations are naïve or, in this context, myopic. With the new $Y'$ price, supply will expand beyond what the market needs. Why? Because $Y'$ is necessarily above the new equilibrium market clearing price $Y^*$. By how much will the supply increase? If the initial equilibrium quantity of bijural services supplied (the one preceding the external shock) is equal to $N_0$, the supply after the shock and after sufficient time for adjustments to take place will be $N'$. The expansion in supply will have been equal to $(N' - N_0)$. As can be verified in Figure 5.1, supply is now greater than demand, so the price of bijural services will have to fall and will fall to $Y''$, a price which market participants, having naïve expectations, will continue to assume is permanent. That price will induce supply to fall to $N''$. The process of adjustment is pictured in Figure 5.1 where an equilibrium is reached at a price $Y^*$ and a quantity supplied and demanded equal to $N^*$. Because the diagrammatics of that process looks like a stylized cobweb, the process is labeled a "cobweb theorem".

The assumption of naïve expectations is unrealistic. It means that market participants do not learn. It is an unrealistic assumption even for markets in which adjustments are complicated and slow as is likely the case for markets for bijural services. A more realistic assumption is that market participants are sufficiently sophisticated to form expectations about future prices that are a

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[24] The possibility that the short-run supply curve may be kinked is discussed by Donald Dewees in his comment on our paper. He also examines some of the implications of the existence of such a kink. We have nothing to add to his analysis which we completely accept.

[25] To insure that markets converge to equilibrium, we require that demand curves be flatter than supply curves. Hence the reference to thoughtfulness and prudence in the text. But we know from Chaos Theory that systems, of which markets are a subset, can "explode" (see Baumol and Benhabib, 1989).

weighted average of current and past prices, giving less weight to prices that are further away in the past. Expectations are then said to be *adaptive*. It is likely that price expectations formed adaptively will not alternatively "overshoot" and "undershoot" the equilibrium price as much as when expectations are naïve. If, however, adaptive expectations also lead market participants to first overpredict and then underpredict the equilibrium price, cobweb-like behavior of price and quantity will still be observed, although the fluctuations will be smaller in magnitude if the predictions are closer to the mark than those made naïvely.

The hypothesis of *rational* expectations is based on the assumption that market participants have a full-blown model of the market for bijural services in their mind and predict future market outcomes, following an exogenous shock, by making use of that model. After a shock that shifts the demand curve in Figure 5.1 from D to D', market participants "predict" that the equilibrium outcome will be $Y^*$ and $N^*$ and make decisions based on that information that lead to an increase in the supply of bijural services equal to ($N^* - N_0$). There are no fluctuations.

The assumption that expectations are rational is also unrealistic because it assumes, at least for markets in which adjustments to disequilibrium are complex and protracted, that market participants possess enormous amounts of information – more than is available. If the acquisition and use of additional information is brought in the picture, the road from disequilibrium to equilibrium will, in all likelihood, display fluctuations. That is one reason why comparing the evolution of prices and quantities in different markets is so difficult and requires the use of complicated econometric models.

## 5.3. Adjustments to dynamic changes

Dynamic changes occur when the demand curve for a service or a commodity is steadily shifting upward. In such circumstances, we cannot be concerned solely by the movement of price toward equilibrium, but we must also consider the rate of adjustment in price in the face of the continued shifts in demand.[26]

Suppose that we have a market which is initially in equilibrium. For concreteness, we may think of this market as that for bijural lawyers. Suppose further that the price of a service (contractual security) that uses bijural lawyers in its production has increased. Assume also that each firm producing this service was in equilibrium before the increase in the price of the service, that is, that it had as many bijural lawyers as it wished to hire at a given salary level. Under the new conditions, the number of bijural lawyers that it would pay the firm to hire at the previous salary has gone up, and therefore the market demand has risen. The change from the old situation to the new is portrayed in Figure 5.2. There $D_1$ represents the original demand curve for bijural lawyers. Curve $D_2$ represents the new demand curve arising from the change in external conditions.

In Figure 5.2, $w_1$ represents the equilibrium price when the demand curve is $D_1$. After the shift in the demand curve to $D_2$, the price that would bring supply and demand into equilibrium is $w_2$. But movement to this new price will take time.

*[Figure 5.2 goes about here]*

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[26] For a thorough discussion of this matter, see Arrow and Capron (1959).

Consider the situation of a law firm just after the shift of the demand curve to $D_2$. At the moment of the shift, the market is experiencing a shortage of bijural lawyers (in Figure 5.2 equal to $b - a$) comparable to what would be faced if the price was artificially held below the equilibrium price. Each law firm seeks to hire additional bijurals at the current price, but there are no more bijural lawyers at this price. In other words, each law firm wants more bijural lawyers than it now has. That is sufficient to create vacancies for as long as the firms do not raise salaries above what they are currently paying. That will eventually be recognized and salaries increased.

While there is, strictly speaking, no single market price while supply adjusts to increments in demand, a multiplicity of prices being characteristic, we may focus on the average price being paid for the services of bijural lawyers. The discussion of the last paragraph makes clear that the average price will tend to rise as long as demand exceeds supply, but it will not rise instantaneously to the level that will bring supply and demand into equality ($w_2$ in Figure 5.2).

If the change in demand is continuous, that is, if the demand curve is rising steadily, then as the market price approaches the equilibrium price, the latter will move away steadily from the former. There will be an enduring shortage in the sense that as long as the rise in demand occurs buyers at any given moment will desire more of the services of bijural lawyers at the average price being paid than is being offered, and the amount of the shortage will not approach zero. The price will increase steadily and indefinitely but always remain below the price that would clear the market. This condition will continue as long as demand is increasing.

Recalling the discussion of reaction speeds and of the other forces that operate in a market when there are static changes in demand, we can conclude that the magnitude of dynamic shortages – the shortages generated by dynamic changes in demand – will depend on the rate of increase in demand, on the reaction speed in the market, and on the elasticity of supply and demand. We made the point earlier that comparing prices and quantities in different markets is a difficult task. The discussion of this subsection should make it even clearer that such exercises require abundant data and the use of sophisticated econometrics.

## VI. Some Comparative Statics

*6.1. Introductory remarks.*

In the last section, we analysed processes of market adjustment consequent on exogenous changes in the demand for bijural lawyers (or services). In the present section, we continue to examine the way the system adjusts to exogenous changes. However, we start at one remove from the changes in the last section. Indeed, we ask how the demand for bijural lawyers varies when there are changes in: a) the efforts of the authorities at nation-building or integration; b) the *modi operandi* of international trade; c) the use of English as a *lingua franca* in international commercial affairs; and d) the use made of Unidroit, Lex Mercatoria, and other such instruments to harmonize legal systems.

Many more such stylized exercises could be carried out. The four we outline, in addition to being of interest in themselves, can serve as templates for further exercises. We believe that our stories or scenarios mimic tolerably well those features of the real world which we have selected for consideration as they are readily observable. We stress that the lack of data prevents us from

elaborating further than we do and, more importantly, prevents us from carrying out genuine tests that would reveal the ultimate value of the stories.

*6.2. Increased efforts at nation-building and integration.*

In a country such as Canada, nation-building by the federal authorities will lead to the implementation of policies aimed at creating bonds among the people of the country through support for common collective symbols, cultivation of pride in artistic and cultural expressions, promotion of a shared sense of equality, and so on. At the same time, the government will cultivate those diversities that give to distinct groups a sense of differentiation and identity. There is a trade-off between the two, and nation-building consists in choosing the mix that maximizes the utility which the population derives from bonding and from diversity. In a supra-national reality such as the European Union, integration by the European Commission in Brussels will lead to the implementation of policies which can generate some standardization in a context in which diversity is a given of history. Again therefore, integration will be achieved by choosing a mix between bonding and diversity that maximizes the utility of the people of the Union. The set of policies which the authorities, either in Ottawa or in Brussels, can use to achieve their objective is large. We restrict our attention to those that can be used to promote or downgrade bijuralism.

Suppose then that the Government of Canada decides to acknowledge that Canada is a bijural country, and to underline this recognition, it decides to promote bijuralism. It could do this by giving subsidies in kind: such would be the case if it created a bureau responsible for bijuralism in the federal Department of Justice. Whenever and wherever appropriate, that bureau could seek to raise the relief or profile of the civil law in undertakings of the federal government which had hitherto been conducted through the exclusive use of the common law. The subsidies could also be in cash and take the form of, say, grants to law faculties that concerned themselves with the teaching of both the civil and the common law. These subsidies would emphasize diversity in the mix of bonding and diversity and, at the same time, would lead to a direct increase in the demand for bijural lawyers by lowering the price of their services.

The subsidies would also reduce the cost of using bijural lawyers in private undertakings and, through that channel, reduce the cost of contractual security and transaction security in commercial dealings whenever the contracting parties inhabited jurisdictions in which the different legal traditions prevailed. Against this, the acknowledgement of the bijural character of the country by the government and the creation of a bureau to recognize that fact will increase the demand for bijurals in the federal government and, through that channel, countervail, to a degree at least, the effect of the subsidies on the price of bijural services in the marketplace.

Turning our attention to the European Union, it is reasonable to assume that the Commission in Brussels would decide that more integration requires a greater harmonization of the civil law systems in use in the various countries of the Union as well as further harmonization of these civil law systems with the United Kingdom's common law system. The consequences of these decisions are very similar to those that would follow an increased use of instruments such as Unidroit and Lex Mercatoria. We consequently defer a discussion of those consequences to subsection 6.5.

*6.3. Effects of transformations in international trade.*

We have already made reference to the transformations which, over the last decades, have taken place in international transactions. Specifically, we have noted that the supply chains of many of the goods offered to consumers have become very international in the sense that they are now typically divided into a number of tasks or stages which are entrusted to production units or accompanying services located in several countries. This explains that a large fraction of international trade is concerned with intermediate goods and services to businesses rather than with natural resources, consumption goods, or services to consumers. The phenomenon, first analyzed in a systematic way by Sanyal and Jones (1982), has been the object of increasing attention in the theory of international trade and the literature on globalization (see, for example, Feenstra, 1998). For a long time, the international division of the supply chains into tasks or stages seemed to affect mostly manufacturing: a large number of manufactured consumer goods were progressively processed in part "offshore". Although this tendency still exists, attention is now more focused on the rapid extension of the phenomenon to services − ranging from activities such as programming, type-setting, or call-centers to back-office, software design, or biotechnological research.

Two features of this international fragmentation of production processes are particularly relevant for our purpose. The first is the importance of coordination among tasks. Inasmuch as units located in various countries must contribute to the production of a single good or service, their contributions must be coordinated in a precise way. In the case of manufactured goods, the stringency of this requirement is strengthened by the adoption of a "just-in-time" strategy which reduces input stocks to a very low level so as to economize on overall costs. This reorganization of production would have been impossible without the considerable concurrent technological progress in the treatment and transmission of data. This applies also, and perhaps more, to the offshore production of services. However, those technological developments play only a permissive role − constitute only a necessary condition − in implementing task-coordination to the required degree of precision and reliability. Other conditions, that we discuss below, are also essential.

The second feature of the international decomposition of production – or in the words of Paul Krugman (quoted in Feenstra, 1998, p. 32), the "slicing of the value-added chain" − is its tendency to involve countries or geographical areas with very different unit costs and labor forces with very different abilities. The cost considerations that motivate the decomposition are to a large extent related to comparative and, even in part, to absolute cost differences. Thus some tasks can be accomplished most efficiently by relatively low-skill but also relatively low-cost labor and will tend to be located in countries such as Indonesia or Senegal which have this factor of production in abundant supply. Other tasks will require high skills of a kind which is relatively abundant and inexpensive in countries or areas such as Vietnam, Russia, or Eastern Europe. Some types of work will be most efficiently allocated to "industrial districts", shaped in the course of time by positive externalities, such as Silicone Valley, the City of London, or Bangalore. Other considerations, such as the availability of natural resources, capital equipment, transportation facilities or, in the case of call-centers, linguistic capabilities, are also important. Still others, such as taxation, financial incentives, law and order, and regulation, are in the nature of policy variables. Provided that the latter factors are not the major determinants of the geographical distribution of tasks, the distribution will reflect a mechanism akin to the one underlying traditional international specialization, albeit somewhat modified to apply to tasks or stages rather than to finished goods.[27]

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[27] In fact, the international decomposition of supply chains discussed here has been referred to as "vertical specialization" by some authors and discussed by them as a simple extension of the theory of international specialization.

It is thus quite natural for most, if not all, countries or geographical areas to take part in these processes of production.

A main implication of the phenomenon just discussed is its dependence on a high level of coordination among tasks allocated to units located in different areas or countries. But the same implication can be derived from a somewhat different phenomenon. A large construction project, even though located in a single country, requires the contribution of many production units (or jobs) accomplishing tasks that must be coordinated to a high level of precision. This has always been so. What is new is the internationalization of these large projects, or of that part of the construction industry which deals with them. The specialized units (corresponding to different "jobs") that contribute to the project now typically come from different countries. Some of the reasons for a vertical specialization according to costs apply here also; the units are likely to come from countries which are quite different in terms of resources and levels of development.

At some cost regarding style and modes of expression (as when we write of "units"), we have been careful so far to avoid reference to firms. The reason is that the phenomenon first analysed by Sanyal and Jones (1982) concerns the location of tasks, or stages of production, but says nothing on the question of whether the chain will be organized within a single firm or will take the form of tasks entrusted to different firms. When the latter solution obtains, contractual and thus normally legal relations between firms located in different countries take centre stage and become particularly interesting.[28] Casual observation indicates that producing offshore is realized today both by vertical integration within multinational firms and by recourse to outsourcing or subcontracting across borders. The early versions of the theory of transaction costs, applied to the boundaries of the firm, would have led one to expect the high level of coordination required by offshore production and the difficulties possibly encountered in achieving it to justify or even require vertical integration. Later versions of the theory, however, are much more cautious or flexible and certainly allow many kinds of market solutions. If we turn to observation of the real world, it seems clear that outsourcing is not losing ground to vertical integration. Indeed, the sheer magnitude of the international decomposition of tasks – in which both outsourcing and vertical integration play a role – is enough to explain that international outsourcing has become a major aspect of international transactions.

We will henceforth assume that the international decomposition of tasks within supply chains or large construction projects is at least in part realized by contracting between firms. The foregoing discussion suggests two interesting characteristics of contracting in this particular setting. Both will, in turn, have some consequences on the demand for contractual security, and therefore on the demand for bijural services. The first characteristic (closely related to the rationale for vertical specialization already discussed) is the involvement of firms situated in different parts of the world and thus accustomed to very different legal systems. According to Nicola Mariani and Graciela Fuentes (2000), the countries of Latin America are civilist, as is Russia, whereas China's legal system is mixed in the sense of combining civil and customary law and India's system is

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[28] To simplify, we exaggerate in the text the difference in this respect between vertical integration and outsourcing. First, the decomposition of tasks may have many tiers making it almost continuous. This allows vertical integration and outsourcing to be combined within the same chain. A decomposition mainly achieved by vertical integration will typically allow some outsourcing also. Second, the integrated part of the chain itself cannot take place without some contractual relations between the vertically integrated multinational enterprise and some independent firms (even if only for the purpose of construction or enlargement of the offshore facilities, or simply to absorb local firms).

mixed in the sense of combining common, customary, and Islamic law. This, by itself, would tend to increase the value of bijural or multijural knowledge, in particular because of the way it increases the capacity to cope with legal systems, practices or cultures previously unexplored. However, the main effect of the enlargement of the set of relevant legal systems or regimes is probably to increase uncertainty about the way emerging possible problems would, in practice, be dealt with. Issues such as the time necessary to get a judgment, or the competence and impartiality of judges, may be much more important in the minds of clients who contract or invest abroad than whether the legal systems involved are closer to civil or to common law. As a consequence, the latitude (if any) to choose both the law governing the contract and the forum in which litigation or dispute resolution can take place becomes essential. Concerns of that kind, as we have already noted, have certainly been a major factor in the development of international arbitration and transnational sets or combinations of laws and procedures.

The second interesting characteristic of contracting in the context of the international fragmentation of tasks stems from the precision of the coordination among tasks which that fragmentation imposes. This requirement explains that contractual obligations will typically have to do with time and quality dimensions rather than with, say, financial commitments. For the parties which have recourse to outsourcing, the main concern will be the exact fulfillment of contractual clauses that specify some idiosyncratic characteristics of the good to be delivered, the exact period in which a contribution must take place, the precise date set for the delivery of a service, and/or the maximum time-span acceptable for responding to changes in future demand or to fortuitous events. In large construction projects, many firms must contribute to the overall undertaking in a precisely coordinated way and according to a very strict time schedule. Even when a firm is entrusted with only a very small part of the overall project, being a little late can cause large disruptions and delays affecting many other firms. Equally important: if the input to be provided is to be integrated as part of a larger object, a very small departure from the prescribed dimensions may make the integration impossible or, when attempted, catastrophic.

Both characteristics, it seems clear, enhance the value given to contractual security. But is that necessarily true? We must recall that the enforcement of commitments of the kind involved here can take forms or borrow paths that do not depend on contracts but on reputation and trust, repeat business, quasi-rents, and other "self-enforcement" mechanisms, along the lines outlined in Section II. For example, the incentive for a supplier not to be a trifle negligent in the way he or she honors commitments in matters of quality or time will often consist simply in a credible threat of exclusion from future business. However, these alternative mechanisms have their own limitations and can in particular be very costly at times (as the discussion in the literature about open versus closed networks of subcontractors has revealed). These mechanisms are certainly efficient in many situations but their availability cannot always prevent the increased importance of coordination-intensive international transactions to result in an increased importance of contractual safety.

As a consequence, the costs of writing contracts, or of identifying appropriate legal ways to deal with the problems they raise, will often appear relatively modest when gauged against the seriousness of the disruptions and damage that non-compliance with the terms of the contract could entail. Variations in these costs will consequently have only a small effect on the quantity of contractual security sought in relation to the transactions we are concerned with. As a result, the

demand for contractual security generated by this part of the economy will be inelastic.[29] According to Marshall's Principle 1 (subsection 3.4 above), this will make the demand for bijural services (by the same part of the economy) also inelastic. For a more general result, it is sufficient that coordination-intensive international transactions now represent a large fraction of the total. As a consequence, the fact that the demand for bijural services related to them is inelastic finds its counterpart in the overall demand for the services being also inelastic.[30]

The absence of data leads us to tentatively conclude that the profound changes in international commerce analysed in this sub-section have had a positive effect on the demand for bijural services (in the sense of causing a displacement to the right of the demand curve for these services) and a negative effect on the elasticity of that demand. As a consequence, even abstracting from forces other than those considered in this subsection, our discussion does not imply that an increase in the supply of bijural lawyers would (as taken by itself the smaller elasticity might suggest) entail a reduction in their remuneration.

## 6.4  Effects of the growth of English as lingua franca.[31]

One can imagine a variety of scenarios related to the effects of the growth of English as the *lingua franca* of commercial relations and of the preparation and drafting of contracts. We focus on only one of these because it has pertinence for the question of the demand for bijural lawyers involved in international transactions.

It is generally accepted that as a result of the hegemonic position of Britain in world affairs throughout most of the 19th century and during the earlier years of the 20th, and of the displacement of that status towards America during and after the Second World War, the English language has emerged as the commonly used vehicle of communication or *lingua franca* in commercial but also in other relations between human beings the world over. Silvana Dalmazzone (1999), basing her analysis on some earlier work of Brian Arthur (1988), has shown that once a language becomes a *lingua franca*, mechanisms – rooted in the reality of network externalities[32] – are set in motion which operate to reinforce that status. As a consequence, the English language is more of a *lingua franca* today than it was as recently as a quarter of a century ago.

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[29] There is another reason for this inelasticity. The possibilities of substitution between contractual security and other ways (the "self-enforcing mechanisms" mentioned above) to pursue the objective of transaction security seem limited in the short and medium term, that is, the elasticity of substitution between contractual security and the other means seems small. Thus by Marshall's Principle 2, this tells us that the demand for contractual security will be inelastic.

[30] Other effects of this change exist. For example, coordination-intensive transactions probably increase the usefulness of contractual penalty clauses. This is interesting because the treatment of these clauses in contracts is quite different in the civil law and in the common law. In a nutshell, these clauses are enforceable under civil law but not under common law systems (see Hatzis, 2003). The tendency for coordination-intensive transactions to become ever more important strengthens the existing pressure on common law judges to make penalty clauses enforceable (as recommended by most economists). The same tendency, which gives saliency to the question of penalty clauses, also gives importance to the way the two legal systems deal with the matter. This must increase the value of employing bijural lawyers.

[31] For a discussion of what should be understood by *lingua franca*, see Breton (1998, 23-24).

[32] A language yields more benefits to an individual the larger the number of people who know that language. Knowing a widely spoken language enables the individual to communicate with a larger number of persons and widens the set of possible interactions available to them. Learning a language, in this sense, means becoming part of a *network* – a community made up of complementary components in which every new entrant, besides gaining access to the benefits of a set of activities, also adds to the potential benefits of all other members (i.e., generates an *externality*).

The first point to note is that the growth of English as the *lingua franca* of commercial relations benefits lawyers as it does everyone whose mother tongue is English (Breton and Mieszkowski, 1977, 266-271); it also benefits law firms that use English as the language of work. Through both these channels, it encourages the use of the common law as the law of contracts in international transactions because English speaking lawyers will, as a rule, have been trained in the common law and will, as a consequence, be more familiar with it. Thus the growth of English as the *lingua franca* acts as a stimulus to the emergence of the common law as a *legge franca* − the law in which a growing volume of commercial contracts are written − through the mechanism, grounded in network externalities, that leads to the growth of a particular language as a *lingua franca*. The common law is more likely to emerge as a *legge franca* under, say, arbitration when the costs and consequences of breaching commercial contracts are not established before specially constituted tribunals. When, to the contrary, breaches of contracts are litigated before national tribunals, the common law is less likely to emerge as a *legge franca*.

However that may be, the emergence of the common law as a *legge franca* will encourage a growth in the demand for bijural lawyers among lawyers initially trained in the civil law − that is, civil law lawyers will have an incentive to learn the common law and thus become bijural. The elasticity of the demand for these bijural lawyers will be the same as the elasticity of the demand for common law lawyers and will respond to the same forces.

As the use of the English language continues to grow through the operation of the forces embodied in network externalities, the number of lawyers who become fluent in English will also grow. Somewhat paradoxically, that will act as a check on the use of the common law because more commercial relations would now likely be conducted in English with, most importantly, the resulting contracts, written in English, making use of civil law as the complementarity of the English language with the common law would have vanished. That growth in the use of the English language and the attendant practice of using the civil law to write commercial contracts will make it profitable for some common law lawyers to learn civil law and, as a consequence, there will be on that score also an increase in the demand for bijural lawyers.

Suppose now, as appears to be the case, that the volume of international commerce among common law countries falls relative to the volume among civil law countries, a situation could arise in which the civil law becomes the *legge franca* (even expressed in English) in one part of the commercial world and/or for one set of transactions and the common law the *legge franca* in another part of the trading world and/or for another set of exchanges. We would then have two *legge francas* and one *lingua franca*. That situation would also stimulate the demand for bijural lawyers.

In all of the foregoing cases, the increments in the demand for bijural lawyers are a consequence of movements from monojuralism to bijuralism on the part of some lawyers. There is, it should be noted, a natural limit to such movements. To see this, we simply start from the fact that the cost of producing a monojural lawyer is necessarily less than that of producing a bijural one. For lawyers to move from monojuralism to bijuralism, it is necessary that the total reward to bijuralism − to the learning of a second legal system − be in excess of the total cost of becoming bijural. As the number of monojurals who become bijural increases, at the margin the reward to bijuralism must fall. When the marginal advantage to becoming bijural reaches equality with the

marginal cost of doing so, an equilibrium is reached and movements from monojuralism to bijuralism come to an end.

*6.5 Effects of new attempts at harmonization*

We have already mentioned the work of undertakings or organizations, such as Unidroit, UNCITRAL (United Nations Commission on International Trade Law), Lex Mercatoria, Vienna Convention, Commission on European Contract Law (Lando Commission), and others, whose purpose is to harmonize or unify some segments of private law. Let us suppose that, as an exogenous event, these endeavors are endowed with substantially increased financial resources. What could be the effect of such an increase on the demand for bijural services?

Looking at the matter in the simplest terms possible, one would expect the effect to be negative. Harmonization would be pursued on a larger scale, which would lead to smaller differences in legal rules and practices among legal systems. In other words, the law would become more uniform. This, by itself, would reduce the utility derived from the employment of bijural lawyers. The demand for the services of these lawyers would fall. If harmonization was pushed to its limit and all differences across legal systems were eliminated, the demand for bijural services would vanish completely.

Things are more complicated for several reasons. First, as set out in Figure 2.1, bijural or multijural abilities also serve as inputs in the activity of harmonization itself. When this activity is increased, we can expect more demand for all inputs, including that of bijural services. This mitigates the negative effect of harmonization on the demand for bijural services. If that outcome is expected to become significant only after a while, say in the medium to long term, the increased demand for bijural skills as an input may generate a positive net effect, that is a short term increase in overall demand. This suggests a time profile of the demand for bijural services: first, a surge in demand immediately following the increase in the flow of resources devoted to harmonization, then a progressive reduction, resulting in a possibly negligible net change in demand.

A second complication, however, becomes relevant at this stage. It concerns expectations. Because, as explained earlier, the acquisition of bijural skills is an investment, the demand for it is likely to be dependent, at least to a degree, on expectations about the profile of remuneration over relatively long periods. Thus, the enhanced possibility that harmonization, strengthened or accelerated by the injection of additional resources, will completely eliminate or seriously reduce, at some date in the future, the need for these skills may have an immediate negative impact on the demand for bijural services. This negative impact may or may not compensate for the positive impact of bijural services as an input in the harmonization process.

Third, harmonization and the employment of bijural services are both inputs in an aggregate production function whose output is contractual security. An exogenous increase in the funding of harmonization is equivalent to a reduction in its price and thus induces a pure substitution effect by itself detrimental to the employment of bijural services. However, there is also an income effect. Additional resources are available. The income effect leads to an increase in the level of contractual security which can be achieved and will normally be sought. In itself, this entails an increase in the demand for both inputs, which will mitigate, and possibly reverse, the tendency toward a diminished demand for bijural services stemming from substitution.

A fourth complication is that the process of harmonization may generate so many changes and disruptions in the legal rules and practices of each country that this increases rather than reduces, at least in the short and medium term, the usefulness of bijural services. Even if, by assumption, these changes do point to a common direction − that of more uniformity − they affect countries whose legal systems and practices are, at the outset, different. The pace and modalities of change are thus likely to be in turn quite heterogeneous across countries. Long-standing differences in rules or practices across countries or systems which were familiar to all will now evolve in such a way that it is quite conceivable that keeping abreast of their state at any point in time will require on the part of practitioners much more effort − and together with that effort a much greater use of bijural services − than when the harmonization process was relatively unimportant and differences relatively stable.

Most of the complications just discussed concern the short or medium term rather than the situation harmonization might conceivably lead to under a perspective of long run equilibrium. But, and this is a fifth source of complications, it is quite conceivable, and perhaps probable, that the unification of the law will not concern the whole world but only a subset of countries or legal systems. If a very significant increase in the resources allocated to harmonization were to take place, the setting in which this would be the most likely to happen is the European Union. There, indeed, the issue of whether private law should be harmonized and to what extent has been discussed for quite a long time, in particular in the wake of the Single European Act, as an aspect of the more general attempt to establish a single market, freed of all barriers.

The two major legal traditions are present in the European Union. Harmonizing common law and civil law may seem to be a tall order, except in particular areas. However, the European Union's present arrangements already allow subsets of member countries to engage in reinforced cooperation in particular areas. This freedom is likely to be significantly enhanced in the constitutional arrangements under negotiation. Thus one could imagine a program of harmonization limited to all or some of the civil law member countries. If such a program was to succeed (assuming, to simplify, that this means complete uniformity), the fragmentation of private law (as with the fragmentation of money) would be eliminated inside the subset of countries but would persist outside its borders. Transactions with the non-participating member countries and with the world outside the European Union would still require services akin to those provided by bijural lawyers. One could imagine that ultimately, at the world level, this might lead to more balance or equality in the attraction power or influence of the civil law and the common law, and thus, perhaps, to more use than today of bijural skills.

### VII. Conclusion

The foregoing discussion is concerned mostly with business transactions in bijural (and multijural) contexts. The basic assumption is that the parties to a transaction seek security for that transaction. That, we further assume, is provided by contractual security in the production of which the services of bijurally (and multijurally) competent lawyers can play a positive role.

The demand for bijural (and multijural) lawyers is therefore a demand that derives from the demand, on the part of parties to an exchange, to acquire − that is, to purchase − transaction security. As such the demand for bijural lawyers obeys the rules or principles of derived demand

formulated first by Marshall (1870) and corrected as well as modernized by Hicks (1932/1963). However, as the discussion of Section II emphasizes, bijural (and multijural) lawyers can do more than contribute to contractual security. Consequently, the demand for their services will, in general, be greater than if it was limited to producing a degree of contractual security.

We test the usefulness of the approach by analysing four cases of change that are taking place in the world today. The changes are exogenous to our main construction. The analysis of these changes is therefore in the nature of exercises in comparative statics. Though the analysis is qualitative − data is not available − it appears to confirm the usefulness of treating bijural services as factors of production.

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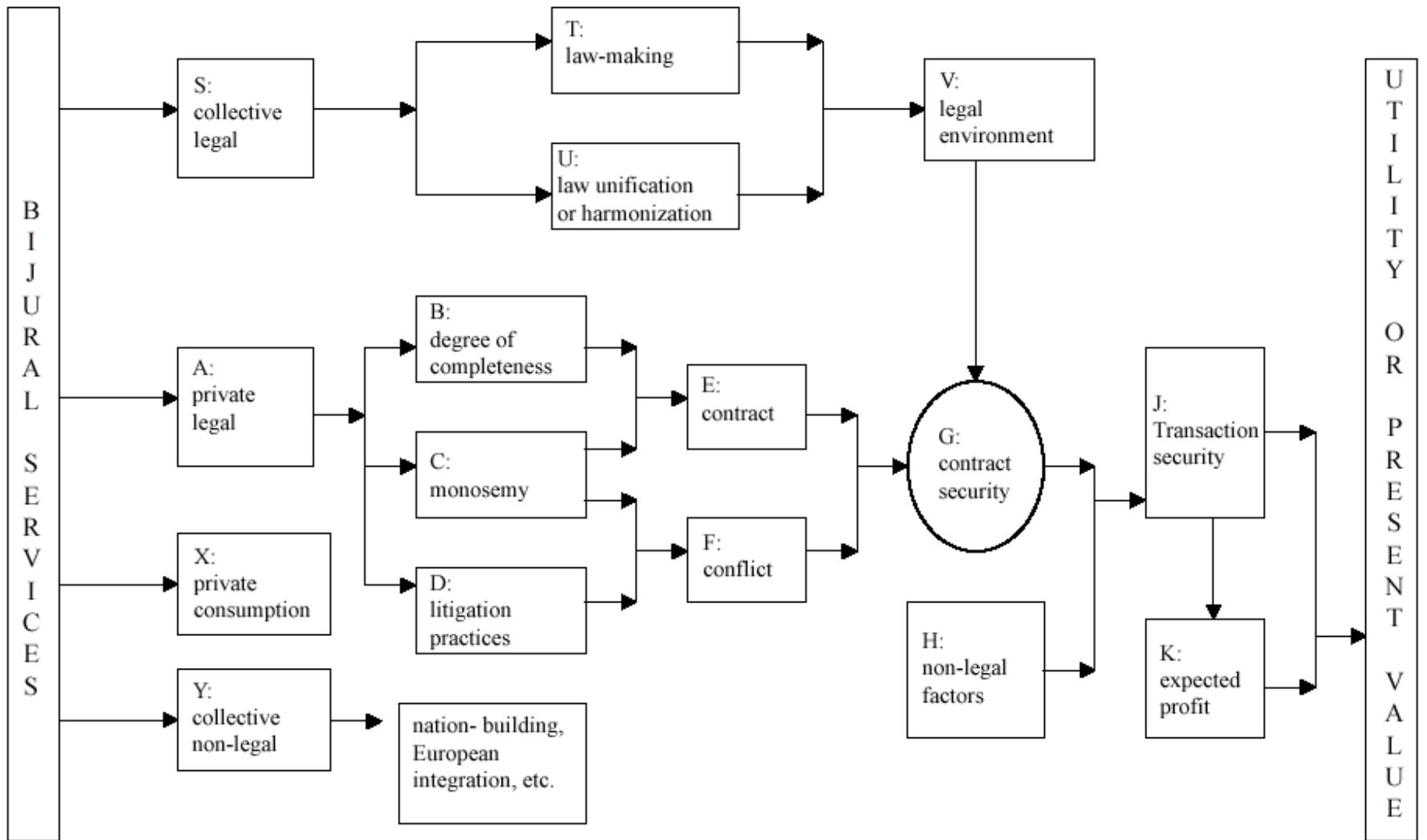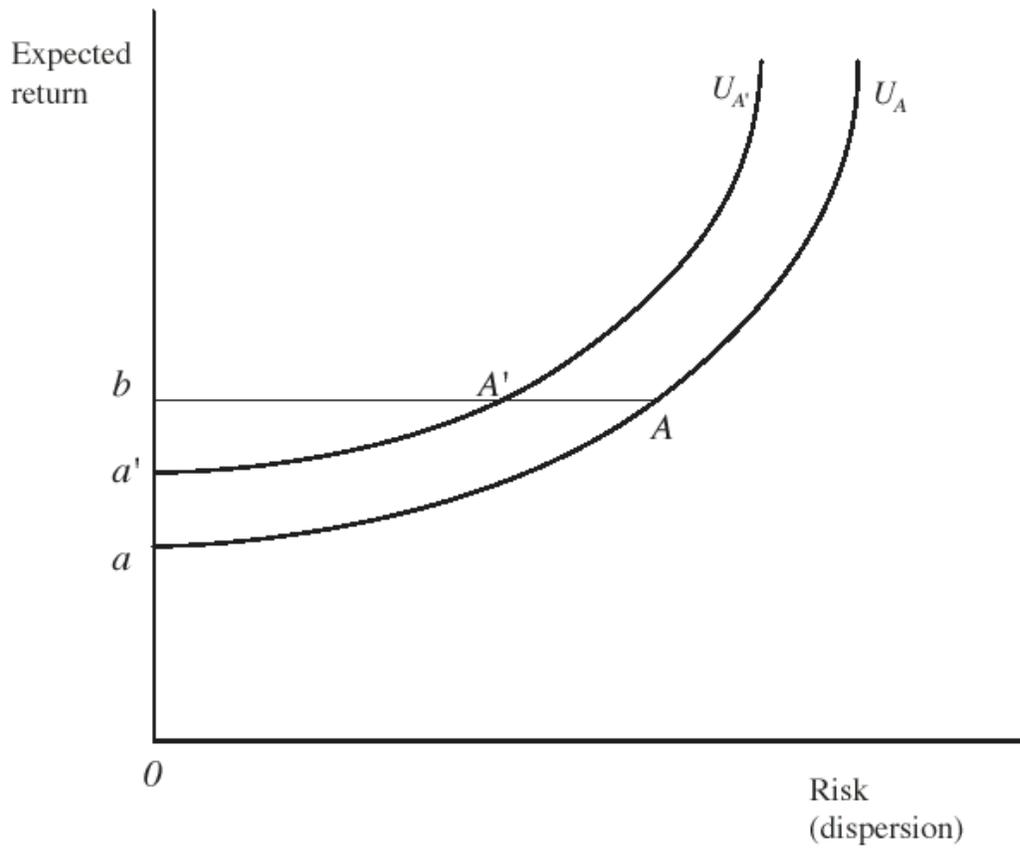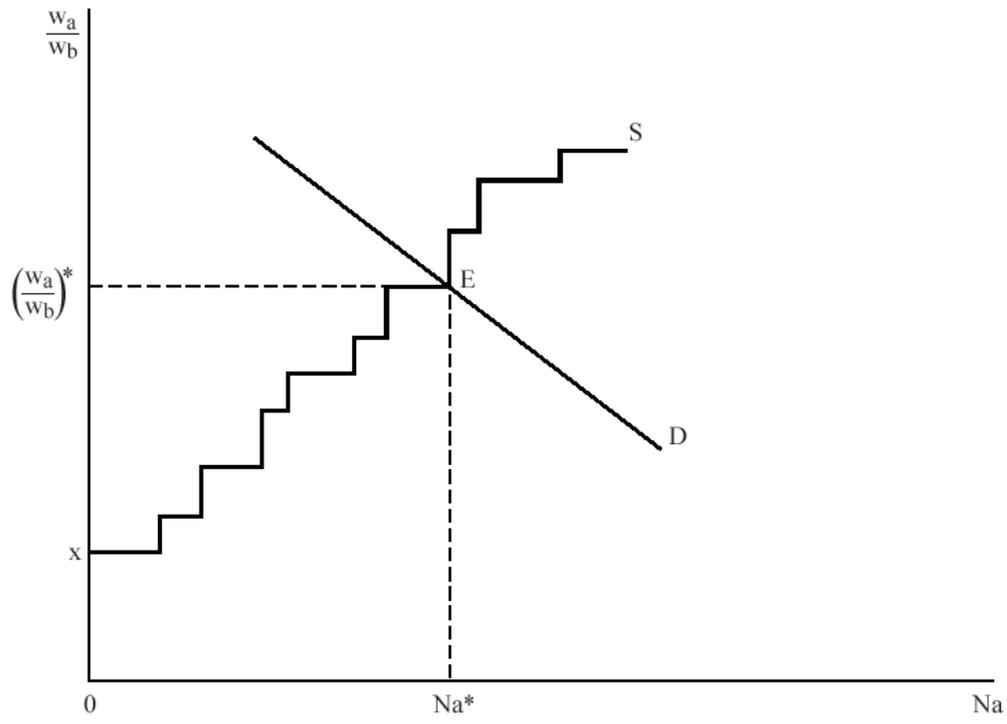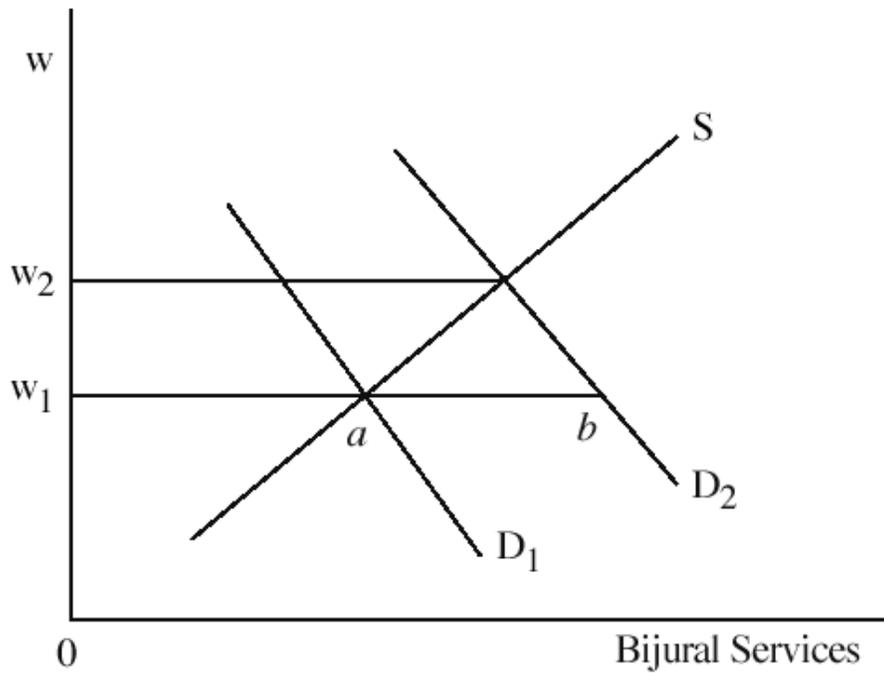
**Figure 2.1**

Figure 2.2

Figure 4.1

Figure 5.1

Figure 5.2