

INTERNATIONAL ACCOUNTING: ANALYSIS OF ACCOUNTING  
SYSTEM CLASSIFICATION MODELS USING  
EUROPEAN COMMUNITY COUNTRIES

by

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In the international accounting research arena there has recently emerged several subjective models that attempt to conceptualize or classify national accounting systems on the bases of varying criteria. This paper analyses the predictive strength of these models and the strength of the models to explain events in the European Community accounting arena. Regulation theory is introduced as an alternative to the newer, subjective models, and the analysis is done via a simple scoring scheme. Conclusions are that the subjective models are best used for the conceptualization of different national accounting systems, and that the predictive power of the subjective models is somewhat less than that of regulation theory.

This Thesis is dedicated in  
loving memory to  
my father

**Daryl Keith Clark**

Born: July the twenty fourth, nineteen hundred forty seven

Died: June the fifth, nineteen hundred ninety two

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## INTRODUCTION

The world is becoming a smaller place. Communication technology has advanced to the point that events from around the world can affect our daily lives. The globalization of ideas has become popular, and having an international awareness has become the norm. As an example, higher emissions standards are being implemented in the US which will impact the automobile industry worldwide [Road & Track, Feb, 1992]. Indeed, increasing global awareness is the impetus for many changes around the world. Increasingly, news media accounts are illustrating interaction between countries via economic and military aid. Trade agreements are being negotiated between many countries that were formerly enemies, and national governments are feeling pressure to work together for the common goal of a better world ecology.

Recently a body of accounting research and literature has emerged involving the study of the differences between the accounting systems of countries worldwide. The models posited by this literature are aimed at the classification and conceptualization of different national accounting systems. In contrast to traditional economic theory, these models explain differences in national accounting systems based on the subjective elements of cultural heritage and economic environment. Thus, an interesting question that arises is whether the more subjective models introduced by Mueller, Nobes, Puxty, and Gray in chapter two as useful in the prediction of outcomes in the international accounting arena. This work is directed toward answering that question.

### Background: The Global Business Environment

Along with the more general global awareness there has occurred a trend toward internationalization and globalization of business. Evidence of this can be found in the major securities markets of the world. Also, globalization of business is apparent in today's current business practices and investment transactions, which are taking on a distinctly worldwide perspective with regard to investment areas (note the recent increase in Japanese investing in the US). Indeed, some define the globalization of business as one economy worldwide, the expansion of manufacturing, distribution and service industries from a domestic to an international theatre, and the increased sharing of technology, improvements in communication, and transportation worldwide[Price Waterhouse, 1991a].

In Europe the increasing internationalization of business has resulted in the European Economic Community (also known as the European Community or EC). Scheduled to become reality in 1992, the EC represents an idea dating back to 1957, with the goal of harmonization of laws to allow the free flow of goods, persons, services, and capital among the member states [Price Waterhouse, 1991a].

Currently the EC consists of 12 sovereign nations (Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain and the United Kingdom)[Price Waterhouse, 1991b]. The Treaty of Rome marked the beginning of the EC in 1957 with an initial membership of six (France, Germany, the Netherlands, Belgium, Italy, and Luxembourg). Goals of the EC were stated:

- \* Removing internal tariffs between the member states and creating one external tariff wall;

- \* Creating a common commercial policy towards third countries; and
- \* Removing obstacles to the free movement of services, capital and people within the Community

In 1973 the UK, Ireland, and Denmark joined the EC followed by Greece, Portugal, and Spain approximately ten years later. In 1985, with the signing of the White Paper, over 300 economic issues were identified that would require action before the EC could truly become a single market [Price Waterhouse, 1991a].

The EC is structured in a manner similar to many democratic nations. There is an *EC Commission*, a *Council of Ministers*, the *European Parliament*, and the *European Court of Justice*. The EC Commission, headquartered in Brussels, Belgium, is the executive body of the European Community, and handles both administrative and political matters. Seventeen Commissioners, appointed by the member states' governments, administer 23 Directorates General (DGs), which are departments that assess major EC policy areas. The larger member states (France, Germany, Italy, Spain, and the UK) each appoint two Commissioners; the smaller countries (Belgium, Denmark, Greece, Ireland, Luxembourg, the Netherlands, and Portugal) each appoint one. The Commissioners swear an oath of independence from their respective countries when taking office. Each Commissioner is responsible for a portfolio or policy area which usually corresponds to one or more DGs. In this manner the responsibilities of the Commission to service the general interests of the EC is carried out [Price Waterhouse, 1991b]. The Commission uses four types of proposals in the execution of its duties to the EC. They are:

- \* *Regulations* - which are immediately binding in all the member states once adopted;

- \* *Directives* - which are binding in respect of the result to be achieved, with implementation left to the discretion of each member state
- \* *Decisions* - which are binding on those to whom they are addressed; and
- \* *Recommendations* - which are not binding

The Council of Ministers (Council), made of up financial ministers from each of the member states, is responsible for the expression and protection of the interests of each member as an individual state. The Council is the principal decision-making body in the EC. The foreign ministers of EC member states are the main representatives who hold Council regularly; but different policy areas call for a meeting of different ministers from each member nation (e.g. the ministers of agriculture, treasury, or defense will be involved in approving legislation related to their jurisdiction)[Price Waterhouse, 1991b]. The Council has a Presidency which rotates every six months among the foreign affairs ministers of the member states. The main task of the Council is to act as the legislature. Legislation may be voted in by simple majority (one vote per minister), unanimity, or qualified majority (where each member State has a weighted vote roughly proportional to the size of its economy), which is used for all legislation relating to the Single Market [Price Waterhouse, 1991b].

With over 500 members consisting of 18 committees and 3 subcommittees the European Parliament (EP) plays an advisory and monitoring role regarding the actions of the Commission and the Council. The Parliament has the authority to dismiss the Commission and reject the EC annual budget. Each member of parliament (MEP) is elected democratically every five years by the citizens of the member states. The President and 14 vice presidents of the EP are chosen by the MEPs from among their own number. The EP is the forum

in which citizens of member states may voice their opinions and concerns.

While it cannot initiate EC legislation, the EP's influence is significant. The EP offers opinions and arguments regarding proposed legislation [Price Waterhouse, 1991b].

Finally the European Court of Justice (ECJ) is the EC's highest court, with the responsibility of interpreting the Treaty of Rome and EC legislation, and also resolving disputes between EC member nations. There are 13 judges on the ECJ ( at least one for each member state), with each assisted by six advocates-general. There is a President of the ECJ, elected by the ECJ judges, with a term of three years [Price Waterhouse, 1991b]. A relatively new branch of the ECJ was formed in 1988 called the Court of First Instance (CFI). The CFI was established to relieve the ECJ of some of its case load. The CFI has 12 judges, one for each member state, with the charge to "handle cases that involve mergers and acquisitions, restrictive agreements and other competition matters, as well as resolving disputes between EC civil servants and their employers (the EC institutions)"[Price Waterhouse, 1991b].

The EC is a dynamic vehicle of change in Europe. Companies and countries are faced with the opportunity to expand in ways that were previously inhibited by the laws of individual countries; these countries have become united on the road toward a single economy. With the recent collapse of communism in the Eastern Bloc , vast new markets in Eastern Europe have been made available to EC companies. The EC is forging new relationships with countries formerly of the Eastern Bloc, and with many countries that are not currently members of the EC [Fortune, Dec 2, 1991]. With these new agreements between the EC and other Eastern European countries the European market is

quickly becoming a vast theatre of change with indications that all of Europe may eventually become one large trading bloc and single economy.

A particularly interesting aspect of the changes in Europe is the fact that, as nations embark on the road to greater cooperation, a number of differences among countries and cultures must be reconciled. Long-standing habits and social systems will quite possibly give way to a more harmonized set of customs and mores. An example is the recently proposed EC legislation to limit the number of foods (excluding potato chips) that can contain artificial sweeteners. British potato chip manufactures, who would have been hurt by such legislation, insisted that artificial sweeteners were an integral part of several flavors of chips, and finally convinced the EC to allow the practice. Many Britons felt the dispute was not only one of merchants protecting their businesses, but also illustrated the habit that EC officials have of ignoring local customs and cultures in the interests of harmonizing trade and eliminating trade barriers [Maclean's, July 29, 1991]. Indeed, this example illustrates the difficulty EC legislators face in attempting to harmonize business practices in Europe.

Business practices, different from nation to nation, must be taken into account when developing a system of greater cooperation between nations. In the world of business the EC has been described as both "replete with opportunities," and as the potential architect of a "Fortress Europe"[Price Waterhouse, 1991a]. There will likely be many regulations promulgated by the EC that govern the business relations between EC member states, and, more importantly, between the EC members as a single market and outside economies such as the United States or Japan.

Ultimately the EC has the potential to affect individual lives throughout the world. With the advent of a united trading block in Europe economies of scale

will likely be realized by firms trading within the member countries, and more importantly by firms expanding within Europe to meet an increasing international demand for goods and services. This means that each individual consumer in the world economy, will quite possibly face a greater variety of goods and services. Thus, the EC represents a change for both businesses and individuals alike worldwide.

Among the EC member states, business practices will need to become more harmonized. Harmonization will be needed to meet the demands that the EC single market will place upon businesses individually with respect to methods of retailing goods, and taxing sales. Business practices that have historically been the legislative domain of several sovereign governments will now need to become homologous, providing a basis for common rules and methods of conducting business.

The difference between harmonized and standardized business practices must be noted as the two are not synonymous. As Gernon and Bindon [1992] note, standardization leads to uniformity, which can be seen as the opposite end of a continuum with total diversity at the other end. Harmony falls as a point between uniformity and total diversity, and is the goal of harmonization. This dichotomy is important because the harmonization of business practices is what the EC legislators are working toward, and total uniformity of those practices is a self evident impossibility given the almost totally diverse background of business practices in each EC member state.

One issue in the EC that is particularly interesting is the harmonization of accounting practices and policies. As the means by which a business reports how it is doing to the outside world, accounting is of great importance to international business concerns. In order to attract new investors, and to gain

additional confidence from credit lenders, firms rely on reports generated by their accounting systems. With the large cost of combining Europe into a single, large economy, capital foreign to European countries will become increasingly important [Fortune, Dec 2, 1991]. With change becoming the norm in Europe, many managers and directors of companies will become increasingly concerned with how they will be required to report business activity in the future.

Accounting systems differ from nation to nation due to a number of elements. These elements include differing cultural heritages and economic environments, as well as the differing effects of the supply and demand for accounting information. These differences provide an interesting background in which to study four alternative models of accounting system classification based on critical analysis and comparison between the models. These models will be explored as alternatives to the more widely known area of accounting regulation theory, which is based on economics of regulation.

Regulation theory can be used to examine the cultural and economic environment classifications of accounting systems, and it can be used to study the current changes taking place in the EC. Specific pieces of EC legislation (e.g. the Seventh Directive on Consolidation) can be studied from the standpoint of the four alternative classification models and with accounting regulation theory. Such an analysis would lead to a fuller understanding of the actions of different groups to the change in accounting rules and practices, and would likely lead to some conclusions as to the validity of the various subjective models of accounting system classification. Economic theory provides explanations for the demand for information about business entities via regulated financial reports. More specifically, accounting regulation theory offers a model with which to study the motivations and actions of groups that are involved in the market for

accounting and financial reporting information, and also to explain the level and form of accounting regulation.

As discussed in chapter three, regulation theory provides a structure to assess the arguments for and against the regulation of financial reporting. The exploration of accounting systems via cultural and economic differences (combined with regulation theory) provides an opportunity to analyze a specific piece of legislation with regard to the background of those groups involved and the mode of accounting and reporting with which these groups are familiar. In the study of accounting-change events in the EC, I will explore both the Fourth and the Seventh EC Directive (governing the consolidation of controlled subsidiaries into single group financial statements), and one or two drafts of each. By studying these Directives, I will be able to judge the validity of the subjective models of accounting system classifications by comparison between the models. My goal is to form an understanding of the alternative models for the conceptualization of accounting systems, and to analyze these models for usefulness. Such an analysis should be interesting to the academic world of accounting, and also of practical use to the accounting profession.

### Literature in the Field of International Accounting

This paper is meant to specifically compare and analyze various comparative accounting models that attempt to classify and compare countries on the bases of national accounting systems and accounting practices. Much work has been done toward providing models that accurately compare nations on these bases. There are several theoretical models of classification and comparison posited by accounting researchers such as Nobes, Gray, and Mueller. This body of research and literature that has emerged in the last 30

years is largely on the comparison of accounting systems of different nations. The subject of international comparative financial accounting research (ICFAR) is the genre into which this paper fits in relation to other writing in the field of accounting in general.

Wallace and Gernon note in their 1991 article *Frameworks for International Comparative Financial Accounting*, "rigorous theory and method are important for any discipline; [International Comparative Financial Accounting Research] ICFAR lacks both. Therefore, there is an urgent need to develop theories that are falsifiable and testable, to sharpen our focus, and to upgrade our methodologies." This statement alludes to another important fact, which is that ICFAR also lacks empirical research to support theoretical models that have already been developed. Wallace and Gernon illustrate this fact in their 1991 article: "ICFAR efforts, so far, lack rigor; crossnational comparison remains at the level of parochial and ethnocentric analyses of single-country systems, and when more than one country is studied, the search for similarities and differences seems to be limited to corporate financial reporting." These problems are inherent in any body of knowledge that is in the first stages of recognition and development. However, models that have been introduced must be assessed for usefulness and validity.

Another way in which to conceptualize the differences in national accounting systems is through analysis using positive accounting theory. Positive accounting theory is based in economics and provides a way in which to understand the international accounting arena, and the motivations that drive different groups in the market for accounting information. In this work, the models discussed in chapter two are presented as a possible alternative to positive accounting theory.

Comparative international research and positive accounting theory are extensive bodies of research, and have not been entirely incorporated into this work. The volume of literature is large enough to prohibit a short analysis on the alternative classification models. Thus, the scope of this paper is limited to four comparative models, and to recent situations in the European Community. These models are evaluated as possible "predictors and explainers" of events that have unfolded in the past 15 to 20 years in the EC.

The balance of this paper is composed of four chapters. Chapter two introduces four models that purport to classify countries into groups on the basis of national accounting systems. This section gives a brief critical look at each model with a more in depth analysis reserved for chapter four. Chapter three provides an introduction to the field of regulation theory which has classically been the source for models that explain and predict outcomes in the market for accounting information (both internationally and intranationally). Finally, chapter four pulls the work together in an analysis of each subjective model via comparison of each on several topics of EC legislation, with conclusions following in chapter five.

## MODELS OF ACCOUNTING SYSTEM CLASSIFICATION

One of the most interesting ways to examine the accounting systems of countries foreign to the reader is to study the background from which an individual system of accounting developed (i.e. the cultural and economic environment). A fairly large body of research and writing has emerged in recent years on the topic of cultural and environmental influences on accounting. Classification schemes and theories explaining accounting systems via their origins are based on the assumption that accounting systems are products of the economic environments and cultures in which they exist. Thus, several accounting researchers have developed models that endeavor to explain and classify different national systems of accounting in an attempt to aid in the conceptualization of those different accounting systems. According to Choi and Mueller [1984] conceptualism is one way to develop a model:

from a philosophy of science perspective then, conceptual development is less ambitious than theoretical development. Concepts are less abstract than theories. Conceptualism exists somewhere between stark realism on the one hand and remote nominalism on the other. For purposes of an endeavor like accounting, a conceptual approach to its development may be more useful than a theoretical approach.

Each model developed by accounting researchers offers a slightly different outlook on the development of accounting systems, and each is valuable to this work in helping to conceptualize the accounting environment within which the EC administrators and legislators are operating.

The conceptualization of a foreign accounting system is important for several reasons. First, it is critical to investors in foreign markets. In the past investments had a much smaller global aspect than they do today. Now the average investor may wish to invest in markets ranging worldwide in order to meet investment goals. In order to make informed investment decisions, today's

investor must be able to understand the financial statements of a firm based in a foreign country. Understanding the background culture and economic environment of a foreign accounting system is the first step in the conceptualization of that accounting system and the ultimate understanding of a foreign firm's financial statements.

Another reason for the understanding of foreign accounting and reporting systems include concerns that the management of a multinational enterprise (MNE) might have in understanding the reporting requirements placed on a foreign division or subsidiary. By understanding those requirements, the management of an MNE can better adapt itself to the foreign reporting situations and plan for them. Also, the MNE's headquarters may use reports generated by a foreign subsidiary for purposes of management and segment evaluation. An understanding of the foreign system of accounting allows management to understand and utilize reports generated by foreign subsidiaries as well as contract with other foreign firms.

The conceptualization of foreign accounting systems is important to this study because it aids in understanding the accounting systems dealt with by different regulatory bodies, and in the development of a framework within which to study and understand the actions of EC member states vis-a-vis the EC governing bodies and promulgated Directives. Thus, conclusions as to why various interest groups have supported or opposed legislation in the EC should be attainable using each model. Four models for the classification of accounting systems are described below. These models are meant as an illustration of the varying methods of conceptualizing different national accounting systems. Each model is critically analyzed with regard to the bases for development, and the

conclusions drawn by each model. Ultimately, legislation by EC governing bodies will be used in chapter four as a final critical look at each model.

### Mueller's Classification

Knowing how a national accounting system develops, why one dominates at one stage in history, and what the broad social and economic costs and benefits of a given system are, we could begin to understand the reasons for the existence and functioning of certain systems of accounting. Also, by classifying different national accounting systems, it is possible to conceptualize a particular nation's accounting system. With an understanding of a country's system of accounting one can then move on to explore the expected impact that certain regulations may have on a particular system. Specifically, one might use such a conceptual framework in conjunction with regulation theory (introduced later) to explore activities in EC member countries in relation to EC legislation.

The notion of classifying existing accounting practices was first introduced by Mueller in 1968. Mueller identified ten "different 'sets' of accounting practices"[Choi, Mueller, 1984]. These ten sets of accounting practices are:

1. United States/Canada/The Netherlands
2. British Commonwealth (excluding Canada)
3. West Germany/Japan
4. Continental Europe (excluding West Germany, Scandinavia, and the Netherlands)
5. Scandinavia
6. Israel/Mexico
7. South America
8. Developing nations of the Near and Far East
9. Africa (excluding South Africa)
10. Communist nations

This model is based on ten different business environments , with each 'set' containing countries with presumably similar business practices. Mueller's

model is fairly simple in relation to other, more current classification and modeling schemes in its basis for classification of countries. However, the significance of this model is that it represents one of the first times that any sort of understanding of the differences in accounting systems was attempted, based on the different business environments in which they operate.

Mueller's classification scheme is not based on empirical evidence. Rather, Mueller has simply grouped countries that appeared to have similar business practices into ten different groups. Thus, Mueller's original classification may be of little value in predicting the reactions of European countries to EC legislation since there is no real measure of how "strongly" each country falls into its respective group. Moreover, Mueller's classification does not distinguish between the groupings of countries on the basis of measurement and disclosure. In their 1980 article Nair and Frank test the grouping of countries on the basis of these two subsets of accounting practices and empirically illustrate that countries fall into different groups when taking measurement or disclosure into account when classifying national accounting systems. In retrospect Mueller's model offers little for the purposes of this study except that it represents an initial attempt to classify countries on the basis of different accounting systems. Mueller was also among the first to recognize the affect differing environments would have on the development of an accounting system in a particular country.

Nair and Frank, using data Price Waterhouse collected in both 1973 and 1975, empirically illustrated that "the number of groupings, the character and composition of each group, and even the underlying environmental variables most closely associated with the practices were quite different between the" measurement and disclosure subsets of accounting [Nair & Frank, 1980]. Thus,

while not really setting forth a theoretical model to follow in grouping countries on the basis of accounting practices, Nair and Frank add much to the body of international accounting research in that they have illustrated that more than one facet must be studied in the comparison of accounting systems.

### Nobes' Classification

The idea of conceptualizing accounting systems was advanced further by professor C.W. Nobes in 1980. Nobes developed an heirarchichal classification of accounting systems which used terminology borrowed from biology [Choi, Mueller, 1984]. Nobes has borrowed the biological terminology of *Class*, *Family*, *Species*, *Sub-species* to describe the levels on which he has classified different national accounting systems. The significance of Nobes' classification (as shown in exhibit 1) is the illustration of the different environmental elements that can affect the development of an accounting system. For instance, following the biological classification scheme, New Zealand's system of accounting is in the same "species" as the UK's while the French system of accounting is in a different "class" all together due to the vast differences in the types of legal and political environments present [Nobes, 1990]. These environments are evidenced at the *Class* level as a "micro", or "macro" oriented government economy.

### Nobes' Elements Causing Financial Reporting Differences

To get to the point of classifying a country one must know something about how financial reporting systems vary around the world, which is admittedly a complex task in itself. One of the key uses of models such as Mueller's and

Nobes' is that, once one has an idea of the source of a certain accounting system's background, the classification becomes easy. By using these models the financial statement reader is able to conceptualize how accounting works in different countries, and thus become a more informed international investor, evaluator, or manager. Along with his model, Nobes has identified six elements on which financial reporting systems differ in Europe. These areas are:

1. The providers of finance
2. Laws of taxation
3. Legal Systems
4. The accounting profession
5. The conceptual bases of accounting
6. Accidents influencing accounting

Nobes discusses of the impact each of these elements has on the development of a country's accounting system. In this paper the first three are the most important in terms of EC legislation due to change in the EC being driven by legislation that is influenced most heavily by these elements. Note is that the providers of finance can exert significant pressure for disclosure, audit and the provision of "true and fair" information (i.e. information that illustrates the "true economic position" of an enterprise, rather than a "proper" legal form of a transaction). For example up until the late 1980's about one million UK companies had to provide audited reports, "whereas only public companies... and a few other very large companies had to do so in West Germany"[Nobes, 1990]. However, after 1987 the EC fourth directive on company law extended disclosure rules to include audited financial information, which means that many German companies must now disclose audited financial information [Nobes, 1990]. The reason for the former disparity in public, audited financial information was that in Germany banks are significant shareholders in large companies often owning controlling interest. This status allows banks (the investors) to acquire

financial information from their investees by simple examination of company books similar to the majority shareholder/CEO of a public company in the US. Conversely, in the UK large public company ownership is characterized by many investors with relatively small shareholdings. Thus, without direct access to financial information, investors understandably require that the information be provided to the shareholders. This specific case also helps to illustrate the effect the EC will have on financial information in general. Readers of German financial statements have much more information today compared to financial statements 10 years ago.

Nobes' discussion on the area of taxation as a element causing financial reporting differences is interesting in light of EC directives to harmonize the accounting in member countries. Nobes notes that the important issue on the national level is "the degree to which taxation regulations determine accounting measurements"[Nobes, 1990]. As an example, in the UK depreciation for financial reporting purposes is "charged in the published financial statements... according to custom established over the last century and influenced by the accounting standard, SSAP 12... [while this amount] for *tax purposes* is quite independent of [financially reported] figures"[Nobes, 1990]. In contrast, Germany and France both have historically had an accounting system that is heavily influenced by tax regulations and tax accounting. In most cases, the tax rules *are* the accounting rules. Thus, in Germany and France, EC legislation to move toward a more judgmental method of accounting (e.g. UK's depreciation calculations) would most likely be met with some resistance from the government and possibly reporting firms due to the potentially higher cost of preparing two sets of financial statements (one for tax and one for external reporting). This conclusion is reached by applying Nobes' line of reasoning

concerning financial reporting differences to analyze France and Germany's former methods of accounting (e.g. depreciation).

The last major element causing differences in financial reporting (at least of those relevant to this study) is legal systems. Nobes points out that there are two basic forms of legal systems, code law and common law, which have been widely recognized in accounting literature as a basic influence on the ultimate form a national accounting system takes. The differences in legal systems are one cause of the above differences in taxation, as noted above. Basically the differences between a code law country and a common law country is that in a code law country statutes set forth *acceptable* practices while in a common law country statutes set forth only practices that are *unacceptable*. Thus, depending on whether a nation's accounting system is governed by common law (as in UK) or by the state (as in France and Germany), there will be marked differences in what a company can and cannot do and, more importantly, there will be differences in how a firm is required to measure and report financial information.

The accounting profession will likely carry weight in proposed legislation, but, as Nobes points out, "the accountancy profession in a country may follow to a large extent from the various factors" of providers of finance, laws of taxation, and legal systems, and "from the type of financial reporting they have helped to produce" [Nobes, 1990]. Thus, as a group, or as several groups, the accountancy professions will have different interests and conflicts with EC legislation, and the profession in each country will likely push for certain types of legislation. But, since the accounting profession in each nation is a product of the elements that shape the accounting system, the profession as a particular element of reporting differences will likely have a similar effect on, and reaction to, EC legislation as do the first three of Nobes' elements.

The conceptual bases of accounting, and accidents influencing accounting (e.g. the stock market crash in the US) all have an impact on the formation and maintenance of a national system of accounting. However, these elements are not expected to have as large an impact on the formation and implementation of EC legislation as the former elements.

Note that these differences will affect EC member states vis-a-vis EC legislation. More precisely, each of the six elements that Nobes introduces will influence how a country will react to proposed EC legislation, and will impact the way a country will implement legislation.

Nobes' classification scheme is not without faults. The largest problem with using Nobes' model as a basis for understanding the actions of various nations and groups vis-a-vis EC accounting legislation is that the analyst must first understand the *reasons* that countries are grouped the way they are in the model. While Nobes' model illustrates some background on the reasons for classifying countries as he does, the classification model cannot be used without understanding the bases for the differences in accounting systems from nation to nation. One way to attain this knowledge is to study Nobes' six elements causing differences for each country. Nobes' model also suffers from problems similar to those experienced by Mueller's initial grouping of accounting systems. Nobes' model must be used in conjunction with some means of first understanding the accounting system or systems one is dealing with before being able to use the model to understand the way in which nations and groups in the accounting arena will act.

Puxty, Willmott, Cooper and Lowe - Elemental Forces in Accounting Systems

Some of the more interesting models explaining differences in financial accounting systems are based on more subjective elements such as societal values and the role of the market, state, and the accounting profession as a community. Puxty et al. describe one such model (first introduced by Streeck and Schmitter, [1985]) in their paper *Modes of Regulation in Advanced Capitalism*. This model (Puxty model hereafter) bases accounting system classification on differences related to methods of accounting regulation. Specifically, the Puxty model shows "how the organizing principles of State, Community and Market apply to the regulation of accountancy institutions and how these principles exist in relation to each other"[Puxty et al., 1987].

As illustrated in exhibit 2, the Puxty model opposes the three organizing principles and places countries between them on the basis of the influence each principle has on the institution of accounting in that country. Puxty et al. give relatively simple definitions of the three elements illustrated and discuss the impact each has on the accounting system of a given country. The State element, in its purest sense, stands for the condition of complete hierarchical control. Thus, by placing a country near the State corner of the model one is illustrating that the particular country's government has a tight legalistic or codified system of control on accounting. This heavy state control on accountancy would indicate that a particular government "seeks to hold companies accountable for their activities," and wants to ensure "that costly information is made available for both market and non-market actors [regulators] -- something the market could not be relied upon to provide"[Puxty et al., 1987]. Similarly, the Market element, standing for free competition among many business entities, illustrates the laissez-faire type of control that would exist if

accounting were regulated simply by the demands of the marketplace for financial information. Finally, the Community element stands for the solidarity that naturally develops in groups with the same interests, and illustrates the pressure from other community elements [Puxty et al., 1987]. One example might be the pressure which exists from the accounting community to provide self-regulation, although the paper Puxty et al. are not clear concerning these community pressures.

The Puxty model stresses that "an appreciation of the structural contradictions endemic to advanced capitalist modes of production is an important key to understanding the fundamental dynamics of regulating accounting policy,"[Puxty et al., 1987]. They point out that the free operation of the Market principle of "dispersed competition" tends "to frustrate its own reproduction since, by definition, each participant in a competitive market -- labour as well as capital -- has a vested interest in excluding the competition"[Puxty et al., 1987]. Thus, the State principle of "hierarchical control" is in place as a mediator of the "contradictory tendencies of capitalism"[Puxty et al., 1987]. Also, "each of these principles of order is in competition for the allegiance of specific groups, for the control of scarce resources, for the incorporation of new issues, for the definition of rules regulating exchanges between them, and so forth"[Puxty et al, 1987]. In this way the three principles of order can indeed be thought of as opposing each other over the "arena" of activities in each nation (in this case accounting policies are the focus of attention).

Within the three-sided framework of State, Market, and Community, countries can be arranged according to the influence of each element on business and accounting practices in that country. Puxty et al. illustrate four

distinct regions of the model's space that correspond to different combinations of the three elements' influence. Thus, "at one extreme, there is... Liberalism whereby regulation is provided exclusively by the discipline of Market principles"[Puxty et al., 1987]. At the other extreme "is the conceptual possibility of Legalism, which relies upon the unreserved application of State principles"[Puxty et al., 1987]. Two other combinations of the State, Market, and Community elements yield the Associationism and Corporatism. In the Associationism mode there "is some dependence upon principles of Community. However, such principles are routinely subordinated to those of the Market"[Puxty et al., 1987]. Corporatism combines the elements with a stronger role of the State, where the State incorporates organized interest groups [such as accountants] into its own hierarchical structure. The difference between Associationism and Corporatism is the role that State plays in controlling the interest groups like accountants to achieve public (State) goals as opposed to private (Market) goals [Puxty et al., 1987].

Placing countries such as the UK, France, or Denmark in the Puxty framework is relatively easy once one has an idea of the roles of the three elements State, Market, and Community (as defined above) in the development and maintenance of a nation's accounting system. In France the accounting standards are set out in national legislation and various regulatory texts and French GAAP is derived from the Business Code, the General Accounting Plan, and pronouncements by the National Accounting Board attached to the ministry responsible for economics [Coopers & Lybrand, 1991]. Here it is easy to see that the State element plays a large part in the French accounting system. Thus, France falls near the Legalism region in exhibit 2, and far away from the Market or Community corners of the model. In contrast, in the United Kingdom, GAAP

is formed in large part by pronouncements by the independent Accounting Standards Board, a body that is professional in nature rather than legislative [Coopers & Lybrand, 1991]. Thus, the UK falls into the Associationism area of the model. Denmark falls nearer the State side of the model than does the UK due to the State organization of Danish GAAP, but is not as extreme an example as France due to the fact that the Market plays a large role in accounting. The Market's role is indicated by the fact that GAAP comes from State sources as well as "undocumented principles or national practices that are commonly accepted," which indicates reliance on the profession's (Market's) judgment [Coopers & Lybrand, 1991].

As simple as the model seems, a caveat noted by Puxty et al. is that the forces that define a nation's accounting system change over time, as well as from region to region within a country. Indeed, Puxty et al. note that "there will be no single matrix of Market, State, and Community principles of organization which will apply to all arenas" [Puxty et al, 1987]. Thus, while the model seems to indicate an interesting method with which to "map" the relative acceptance or resistance of a country to a particular EC directive, the variability of the forces on a nation's accounting system, and on specific issues within that system, indicate that the model is not appropriate for this task. Although, over time the model may prove useful in illustrating the change in a nation's accounting system given the dynamics of each element.

### The Gray/Hofstede Model of Societal and Accounting Values

A more complex model that explains national accounting systems in light of cultural influences is that of Sidney Gray. Gray built upon the work of Geert Hofstede in his analysis of the development and classification of accounting

systems. Hofstede did considerable work in documenting several social, cultural, and economic factors that have an impact on the development of accounting systems, and concluded that there are basically four national value patterns that affect accounting in a particular country. These values are Power Distance, Uncertainty Avoidance, Individualism, and Masculinity [Hofstede, 1986]. Gray uses these social values, as documented and measured by Hofstede, and relates them directly to four accounting values that deductively arise out of the social values. Thus, Gray associates social and accounting values, noting that "if such a relationship exists then a link between societal values and accounting systems can be established and the influence of culture assessed [Gray, 1988].

Gray defines four accounting values as follows:

*Professionalism versus Statutory control*-- the exercise of individual professional judgment and the maintenance of professional self-regulation as opposed to compliance with prescriptive legal requirements and statutory control

*Uniformity versus Flexibility* -- a preference for the enforcement of uniform accounting practices between companies and for the consistent use of such practices over time as opposed to flexibility in accordance with the perceived circumstances of individual companies.

*Conservatism versus Optimism* -- a preference for a cautious approach to measurement so as to cope with the uncertainty of future events as opposed to a more optimistic, laissez-faire, risk-taking approach.

*Secrecy versus Transparency* -- a preference for confidentiality and the restriction of disclosure of information about the business only to those who are closely involved with its management and financing as opposed to a more transparent, open and publicly accountable approach [Gray, 1988].

These values are each related to Hofstede's four societal values. Thus, professionalism is linked most closely with the individualism and uncertainty-

avoidance dimensions. Uniformity is associated most closely with the uncertainty-avoidance and individualism dimensions (in that order).

Conservatism is linked with uncertainty avoidance, and secrecy is linked with the uncertainty-avoidance, power distance and individualism dimensions [Gray, 1988].

Based on his conclusions about the link between societal values and accounting values Gray presents four *hypotheses* related to the four relationships:

- H1: The higher a country ranks in terms of individualism and the lower it ranks in terms of uncertainty avoidance and power distance then the more likely it is to rank highly in terms of professionalism
- H2: The higher a country ranks in terms of uncertainty avoidance and power distance and the lower it ranks in terms of individualism then the more likely it is to rank highly in terms of uniformity
- H3: The higher a country ranks in terms of uncertainty avoidance and the lower it ranks in terms of individualism and masculinity then the more likely it is to rank highly in terms of conservatism
- H4: The higher a country ranks in terms of uncertainty avoidance and power distance and the lower it ranks in terms of individualism and masculinity then the more likely it is to rank highly in terms of secrecy [Gray, 1988].

Gray has formulated these hypotheses in a manner such that important "societal values at the level of the accounting subculture would seem to be uncertainty avoidance and individualism. While power distance and masculinity are also significant to some extent, masculinity appears to be of somewhat lesser importance in the system of accounting values"[Gray, 1988].

Thus, Gray's hypothetical model introduces ways in which to contrast countries based on their societal values, and then to formulate an expectation of specific accounting values and compare countries on that basis. Indeed, with

the spatial orientation of Gray's model (see exhibits 3 and 4) the country to country comparison of accounting systems is made easy. In this manner one can compare the accounting system of one country to that in another country (e.g. France, the UK, and Denmark) and, more importantly, *compare one nation's accounting system to general EC accounting policy*. One can theoretically then begin to predict the difficulty or ease of compliance with EC directives a specific country will likely face, and also the acceptance or rejection of some piece of EC legislation.

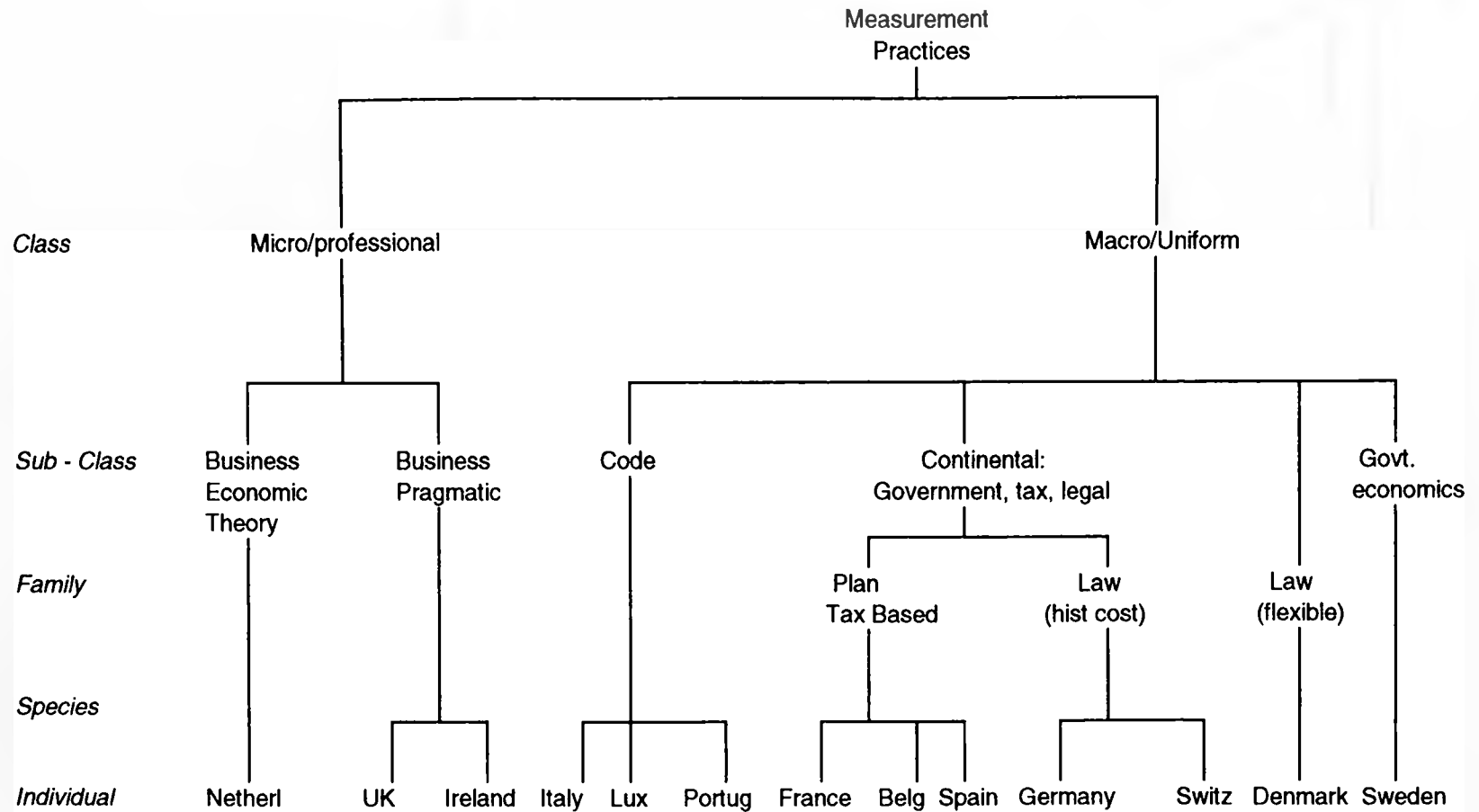
Still, Gray's model is not without problems at some very basic levels. Hofstede did considerable work in mapping out actual figures for the societal values of Uncertainty Avoidance and Power Distance (see exhibit 5). However, Gray does not offer any concrete link between these values and those accounting values that are hypothesized to affect accounting systems. Gray only states that a link should exist, and if so, that societal values would likely give rise to his four accounting values. Gray's line of reasoning is not borne out by empirical research. Gray ends noting that he has proposed a way in which the cultural influence on accounting can be studied. In light of this comment, Gray's model, based on Hofstede's empirical work on societal values, provides a more concrete model with which to compare the accounting systems of EC countries to each other and to EC policy.

The four models introduced: Mueller's, Nobes', Puxty's, and the Gray/Hofstede model are all attempts to illustrate differences in national accounting systems. Each takes a slightly different view of the elements important to the explanation of differences, with the first two relying on the more objective elements of accounting rules, and the last two relying on more subjective elements such as values and the impact of Market and State.

However, each is relevant to the goal of this study in that each provides a different perspective on how accounting systems vary internationally. Each should be useful in helping to explain and possibly forecast the reactions of accounting communities to EC directives. These models will be analyzed on their ability to perform this function in chapter four. This analysis will be done by analysis conformities and discrepancies between the models.

Exhibit 1

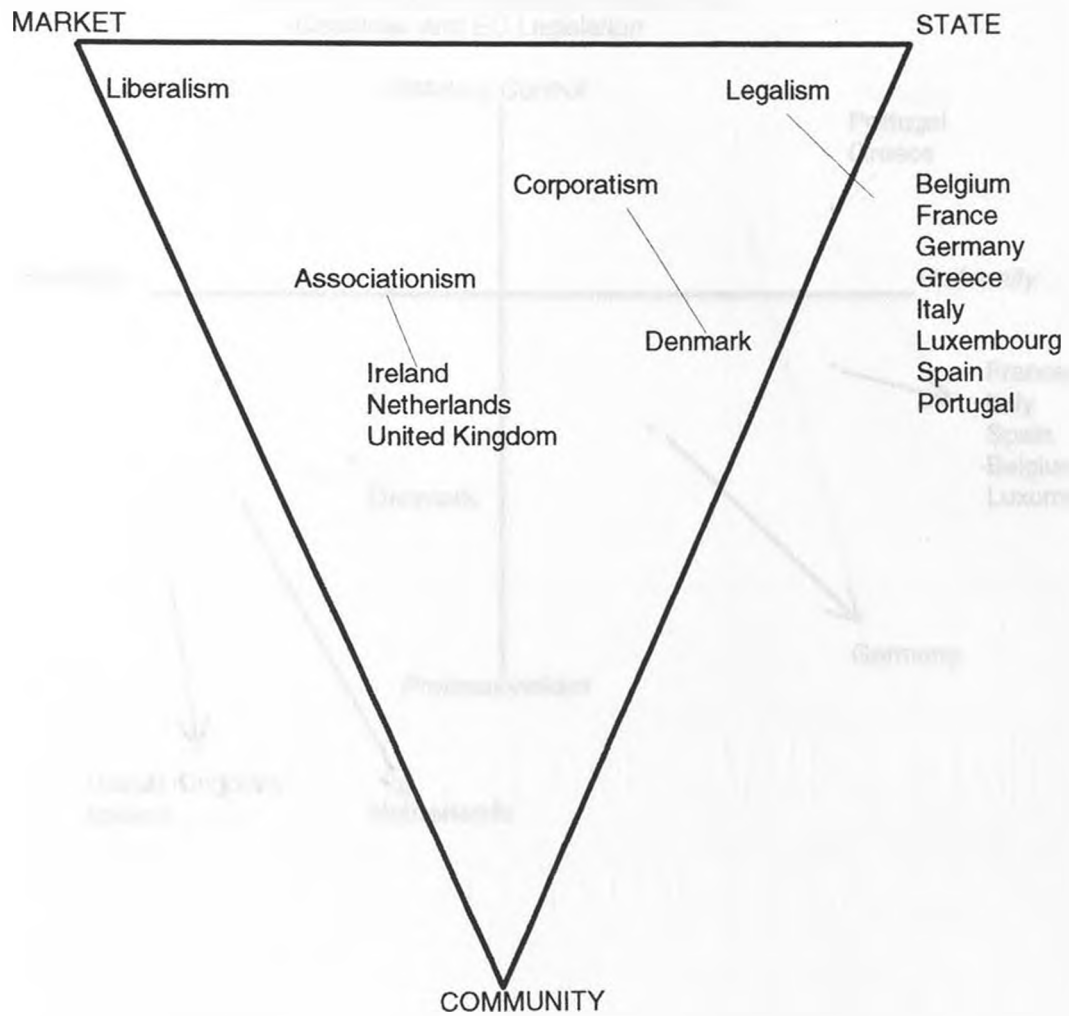
## Nobes' Biological Classification Of EC Countries



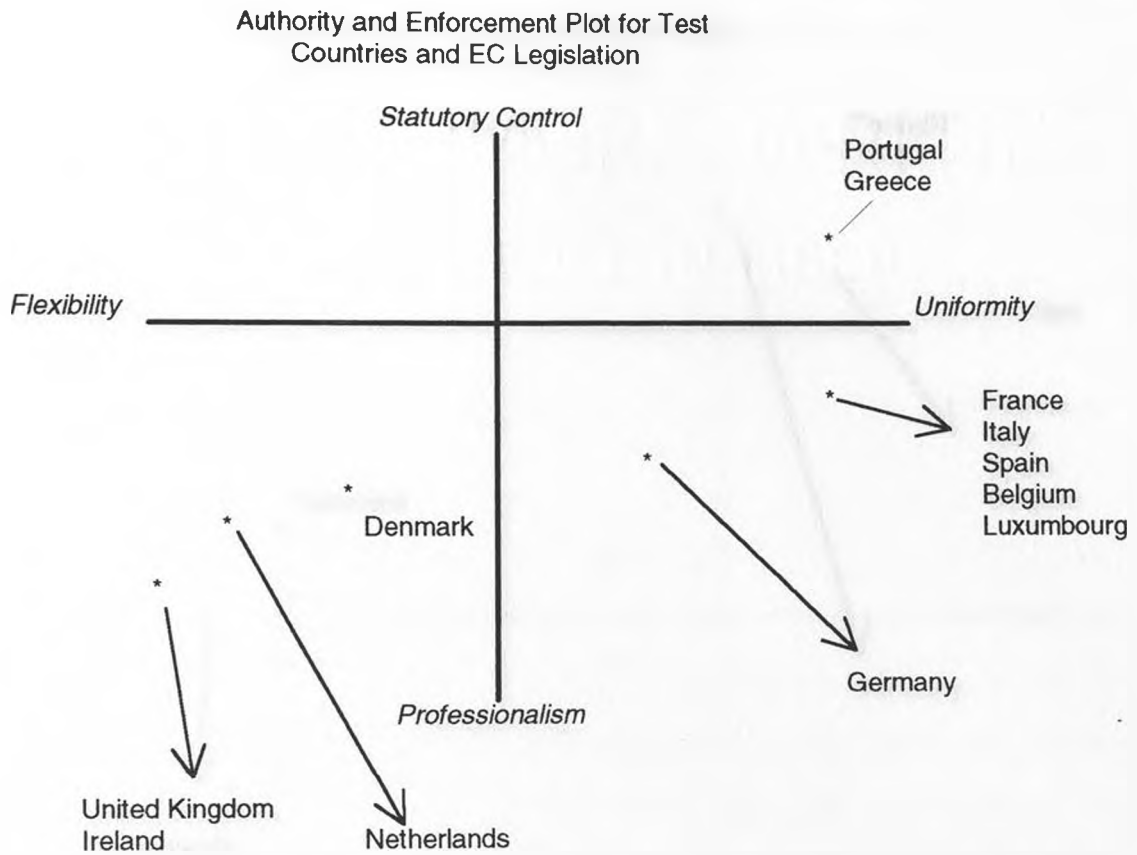
**Source: C. Nobes [1991]**

Exhibit 2

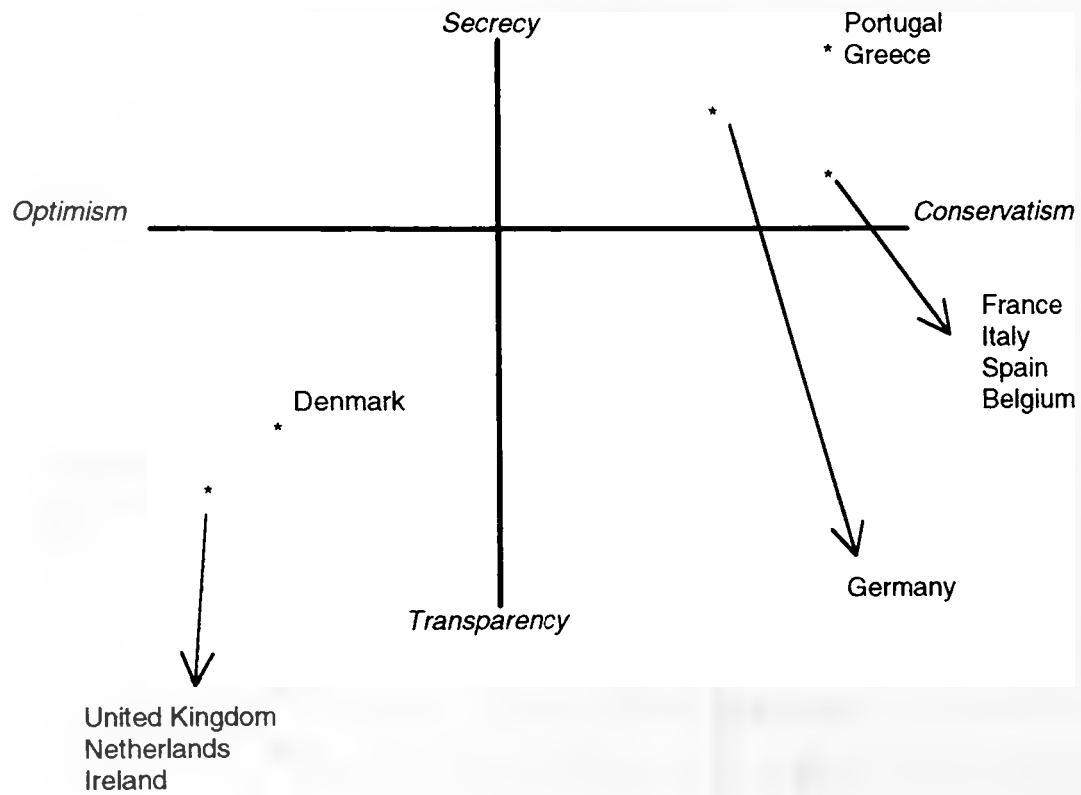
## Puxty Model



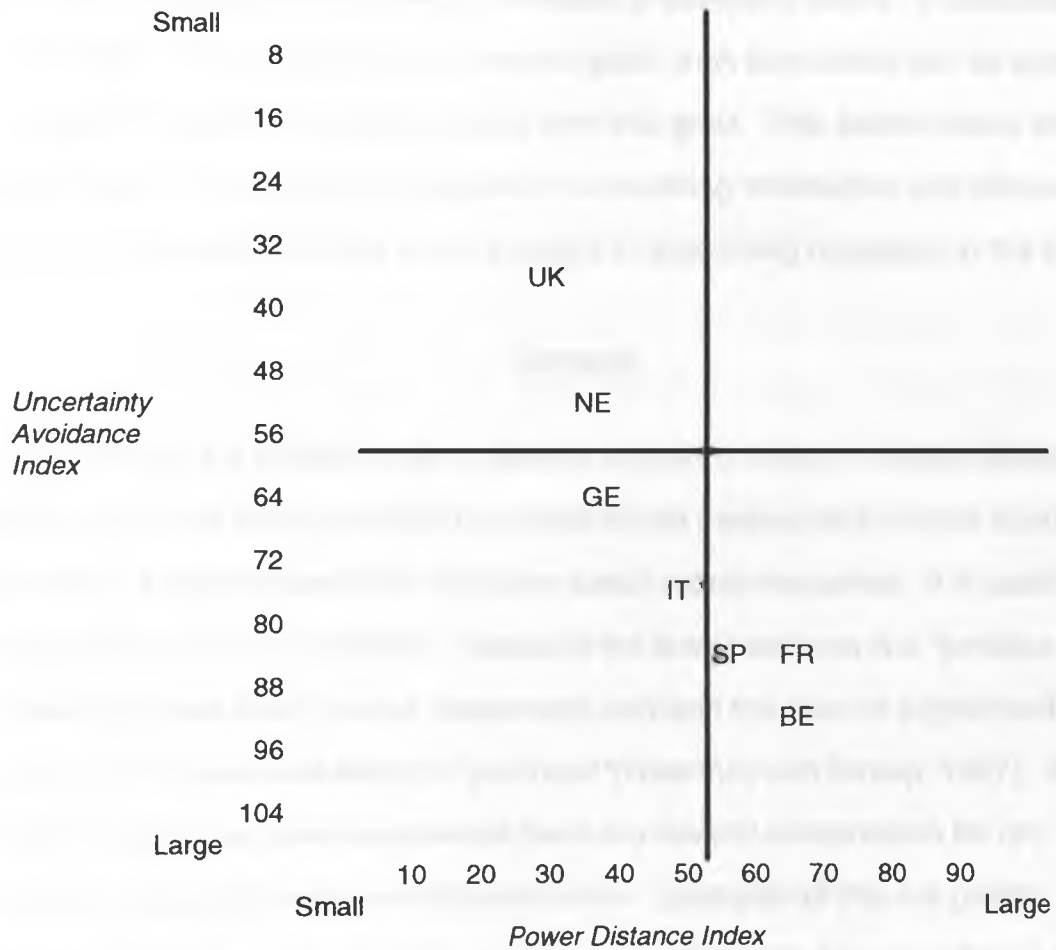
Source: Puxty et al, 1987.



Measurement and Disclosure Plot for Test  
Countries and EC Legislation



Power Distance by Uncertainty Avoidance Plot  
for some EC Countries



Source: G. Hofstede. [1980]

|    |                |
|----|----------------|
| BE | Belgium        |
| FR | France         |
| GE | Germany        |
| IT | Italy          |
| NE | Netherlands    |
| SP | Spain          |
| UK | United Kingdom |

## REGULATION THEORY

Regulation theory is based in economics and analyzes the supply and demand for financial accounting information in economic terms. If accounting information is thought of as an economic good, then economics can be applied to study the actions of groups dealing with that good. This section deals with the essentials of the supply and demand for accounting information and discusses the use of regulation theory in the analysis of accounting regulation in the EC.

### Demand

Demand is a basic tenet of general economic theory. Indeed, demand and supply have been combined to create broad theories and models about the behavior of people faced with decisions about scarce resources. It is based on assumption of human behavior. Basically the law of demand is a "principle that states that there is an inverse relationship between the price of a good and the amount of it buyers are willing to purchase"[Gwartney and Stroup, 1987]. Also, since no particular good is essential there are several substitutions for any particular good that may take different forms. Examples of this are greatly abundant in our world today. For instance an automobile is a good that is of value to, and is demanded by, a large number of people. Further, differing "forms" of automobiles are demanded by different sets of people. Thus, a particular automobile parked in a particular driveway is dependent on buyer preferences subject to budget constraints.

However, the demand for goods is not affected by only the ultimate user of those goods. In the automobile example, several parties that do not use the automobile impact on the form it takes. By requiring that automobiles sold in the

US conform to certain specifications the US government partly determines the ultimate form of the automobile. Thus, demand for a good is affected not only by the class of people that place value on that good, but also by "outside" parties such as governmental bodies who *regulate* the form of those goods. The law of demand is evident in the market for accounting information as described below.

### Demand For Accounting Information

An assumption which holds in the EC is that there is demand in every country by some party or parties for accounting information. George Foster [1986] offers a description of the parties involved in the supply and demand for accounting information, and a short analysis of the operation of the two forces, in his book *Financial Statement Analysis*. Foster identifies six parties demanding financial statement information: "(A) shareholders, investors, and security analysts; (B) managers; (C) employees; (D) lenders and other suppliers; (E) customers; and (F) government regulatory agencies"[1986]. Foster goes on to note that these "parties will demand financial statement information to facilitate decision making, to facilitate the monitoring of management, or to interpret contracts or agreements"[1986].

The first group that Foster identifies (the shareholders, investors and security analysts) have an interest in financial accounting information because it is a means by which they can gage the performance of the management of a firm in which they have invested in, may invest in, or are analyzing. Foster notes that "management has considerable discretion concerning the use and disposition of a firm's resources... [and] can make decisions that divert these resources from existing shareholders, leaving them with only a 'corporate

shell"[1986]. This conflict of interests between the management and investors has "created incentives for

- \* Contracts... that better align the interests of management and shareholders (e.g., the issuance of stock options as part of the compensation contracts between management and the firm...)
- \* Information to be presented by management... that discloses how management has used the resources under its control (e.g., the issuance of interim and annual financial statements to shareholders)"[Foster, 1986].

The above elements thus create a demand on the part of shareholders for accounting information.

Foster notes that managers also have an incentive to demand accounting information. One source of management demand for financial accounting information "arises from contracts that include provisions based on financial statement variables," (e.g., return on equity) [Foster, 1986]. Also, contracts between the firm and other entities may include terms that refer to financial statement variables. An example would be agreements between parent firms and subsidiaries that may agree on one being compensated at a certain rate for management services based on net income. As noted in the section on institutional influences on accounting system development, managers may also use accounting information in evaluation and financing decisions regarding both domestic and foreign subsidiaries.

Employees have an interest in accounting information for several reasons. For reasons of job security "employees have a vested interest in the continued and profitable operations of their firm... [and] also demand financial statements to monitor the viability of their pension plans"[Foster, 1986]. As Foster notes,

employees' interest in financial accounting information may be magnified by the inclusion in contracts of compensation agreements based on financial statement variables such as pretax net income.

Lenders and other suppliers may use accounting information for several different purposes. In the case of a bank lending a firm funds there may be a contractual agreement between the lender and the borrower based on financial statement variables (e.g., debt covenants that may make a certain portion of long-term debt due currently if the current ratio falls below a specified level). One effect of such covenant agreements is to create a demand for financial accounting information in the form of financial statements. Suppliers of a firm would demand the accounting information of that firm to estimate the liquidity and future supply needs of the reporting firm.

Finally, government regulatory bodies have a diverse set of demands for accounting information. These demands arise from such areas "as

- \* Revenue raising, for example, for income tax, sales tax, or value-added tax collection
- \* Government contracting, for example, for reimbursing suppliers paid on a cost-plus basis...
- \* Rate determination, for example, deciding the allowable rate of return that an electric utility can earn
- \* Regulatory intervention, for example, determining whether to provide a government-backed loan guarantee to a financially distressed firm"[Foster, 1986].

Thus, the demand for accounting information comes from a wide array of areas and groups.

Foster provides a simple and straight forward analysis of the demands for financial accounting information. The parties that demand accounting information are generalizable across many different countries and their accounting systems. One important conclusion that may be drawn from Foster's analysis of the demand for accounting information is that, with a diverse set of parties demanding accounting information, there will likely be differences in the amount and form of accounting information that is demanded. Even more importantly, one would expect that out of the many parties that demand accounting information in a given country, the most influential party will determine the form that the demanded accounting information will take. For example, if banks play a large role in the financing of business operations (as has historically been the case in Germany), and there are relatively few individual shareholders, one would expect disclosure of accounting information to be limited to those that have the most interest in the business (i.e. the banks). Moreover, countries having significantly different accounting systems, and different parties demanding accounting information (as in the EC), would be expected to have difficulty in reaching agreements regarding the creation of a homogeneous international accounting system.

### Supply

Supply is also a basic tenet of general economic theory, and is also affected by elements similar to those influencing demand. The law of supply is a "principle that states that there will be a direct relationship between the price of a good and the amount of it offered for sale"[Gwartney and Stroup, 1987]. Thus, suppliers will produce more of a particular good the higher the price is holding all other influencing factors constant. Extending the example above, the producer of an

automobile will produce automobiles at a rate that will afford the highest level of profit subject to certain constraints on the production process. Further, based on the law of more supply accompanying higher prices, the decision of how many automobiles to supply is based on the costs and benefits associated with supplying them. As with demand, the producers alone are not all that affects the supply of a good. The influence of government bodies on the form that automobiles take will directly influence that amount and configuration of automobiles supplied. This is due to the authority that governments have on the operations of auto makers in a given country. If an auto manufacturer does not conform to the rules of making automobiles that manufacturer is barred by the government from producing or selling automobiles in that country. While not as precisely definable as the normal good of automobiles, the supply phenomenon that exists in the example of auto manufacturing and purchasing exists with regard to accounting information as described below.

### Supply of Accounting Information

As well as a demand for financial accounting information, there is also a supply side of the model. Based on the general understanding of supply in economics (as discussed earlier), the supply of accounting information works in much the same manner. Foster describes the supply of accounting information and also outlines the key parties with regard to that supply. As exhibit 6 illustrates, there are several factors affecting the accounting information set available to parties external to the reporting entity. These factors are discussed below.

Foster describes evidence of non-mandatory, market driven disclosures, noting specifically that

"financial statements were publicly released by firms well before the formation of the major regulatory forces currently influencing financial reporting... financial statements are voluntarily issued by entities not under the jurisdiction of regulatory bodies... firms issue financial statements at more frequent intervals than mandated... [and] some firms provide considerably more information in their financial statements than is mandated"[1986].

These elements of the supply of financial accounting information seem to be a phenomenon that can be linked directly to the effect of market forces on the supply of financial statement information. Indeed, firms compete in the capital market on many dimensions including the types of securities offered for sale, the terms of those instruments, and the distribution of those instruments. Thus, as Foster notes ",market forces will exert pressure on firms and other capital raisers to provide financial information that relates to the forgoing factors"[1986]. This is distinctly an illustration of the demand for accounting information affecting the supply for that information, which is a common doctrine of economic theory. However, as discussed in the next section, these forces (market forces) of demand and supply working together may not always lead to a favorable outcome (e.g. the maximization of social utility).

Foster goes on to describe the capital market and the influences that it may have on the provision of information in financial statements. In short, the uncertainty of the quality of investment a firm offers to the potential investor, and the cost of that firm being perceived a "lemon" investment, gives rise to several mechanisms to reduce the likelihood of misrepresentation of a firm in its financial statements. These mechanisms included the reputation of the firm itself, the reputation of the management of the firm, third party certifications of the quality of the information in the financial statements, and legal penalties enforced against firms that misrepresent themselves. Thus, the demand forces in the

capital market cause several mechanisms to develop to ensure the safety of the investor with respect to information provided in financial statements, and ultimately demand affects the content of those financial statements.

Aside from forces on business entities to supply appropriate financial accounting information there are also costs associated with disclosing that information. Foster outlines these costs and groups them into several categories. In brief these categories include

- \* *collection and processing costs* (i.e., costs the firm bears in producing accounting information for distribution);
- \* *litigation costs* (i.e., the possibility of suit brought against management for incorrect or false information in the financial statements);
- \* *political costs* (i.e., governmental bodies expropriating wealth from firms showing inordinately large profits in their financial statements);
- \* *competitive disadvantage costs* (e.g., the usage of information disclosed about one firm being use by its competitors to set performance objective or labor unions to gain bargaining power); and
- \* *constraints on management behavior* (e.g., pressure on management to divert the performance of the firm to meet expectations of investors with regard to trends etc.) [Foster, 1986].

These costs figure into the traditional cost/benefit analysis used to decide whether or not an activity is worthwhile.

### The Market for Accounting Information

The market for any good is "an abstract concept that encompasses the forces generated by the buying and selling decisions of economic participants...

[and] may be quite narrow." [Gwartney and Stroup, 1987]. The market for accounting information is an example. In theory, the forces of supply and demand will work through the participants in a particular market to achieve economic efficiency, which is a state where "for any given level of effort (cost), we... obtain the largest possible benefit" [Gwartney and Stroup, 1987]. Thus, efficiency in the market for accounting information would dictate a state in which the users (demanders) of accounting information receive that information as long as their benefit exceeds the cost of producing that information. This state of economic efficiency would generate the greatest social benefit due to the action of the forces of supply and demand, which create a "socially efficient" state. Such an efficient state would be the outcome of a market that worked without failure.

### Regulation and Market Failure

Many markets are regulated in the world today. In the US examples include the utilities market, the market for automobiles (import and export), the market for dairy products, and of course the market for accounting information. The reason for regulation that is most often cited is that a market would not function in the efficient manner described above if left to itself. The inability of the market to produce an efficient outcome for society, called market failure, can occur for a number of reasons. A failure in the market for accounting information could occur where a particular firm is a monopolist of information about itself. This situation "creates the opportunity for restricted production and monopolistic pricing" of accounting information [Wolk, Francis, and Tearney, 1984]. This situation could logically lead to the underproduction of accounting information about a firm for those stakeholders in that information.

Another scenario that describes why the market for accounting information might fail is the agency problem that exists between the owners of a firm and the managers of that firm's assets. Managers are in control of the day to day disposition of the assets of a firm, and are thus placed in a position to achieve personal gain by the manipulation of those assets. This goal conflicts with that of the owners of a firm, who most likely wish to maximize return on investment, and is a problem dealt with in the employment contracts of managers. However, the potential still exists for managers to manipulate accounting information to achieve personal gain. This is another possible failure of the free market for accounting information. Such a failure would occur if, in light of a previous forecast issued by a firm about its earnings, the managers of that firm acted to keep actual earnings closer to the forecast rather than taking opportunities that maximized earnings. Another similar failure would occur if managers rejected firm value-increasing projects that had projected short-term earnings inconsistent with the publicly stated corporate objective of, say, 15% increase in earnings per share [Foster, 1986].

It is important to note at this point that the theories that exist about the failure of any particular market are most often used to support the argument of those that believe that governmental regulation is needed in order to induce that market to operate in the most socially efficient manner. Thus, the points that such theories raise usually lead one to conclude that a regulated market is preferable to an unregulated market. This is not to say that any level of regulation is better than a market without regulation. The theories that support the pro-regulation point of view are many and include theories that incorporate the classic problem of accounting information as a public good.

Public goods are commodities that, once produced, can be consumed without reducing the opportunity for consumption by others. Accounting information has been argued to be a public good having soft property rights since, once a firm publishes financial information about itself, that information can be reproduced and freely passed from person to person; each person consuming or absorbing the content of the information. Theories along this line argue that "the opportunities to contract privately for firm-specific information would be restricted" by firm, and "the outcome would be an underproduction of accounting information in an unregulated market" [Wolk, Francis, and Tearney, 1984]. Regulation is thus suggested as the key to achieving a supply of accounting information that is sufficient to meet the real demand of that information (i.e. the demand by all interested parties) and thus guard against market failure (i.e. a condition of non-Pareto efficiency).

In the countries of the EC regulation has played at least some part in the formation of each national accounting system. In his discussion of the supply of accounting information Foster describes a feature common to financial reporting in many countries which is the existence of "public sector-based regulatory forces that affect the disclosure decisions of firms and other entities"[1986]. Thus, governmental regulatory forces are at work in many countries directing disclosure practices of reporting entities. In Denmark one of the principle sources of GAAP are legislative Acts that prescribe accounting and disclosure rules. In France GAAP is set forth in the Business Code, and in the General Accounting Plan, both of which are products of French legislation. In the UK accounting is governed by the Companies Act of 1985 as amended in 1989, also a product of legislation [Coopers & Lybrand, 1991]. It is easy to see that

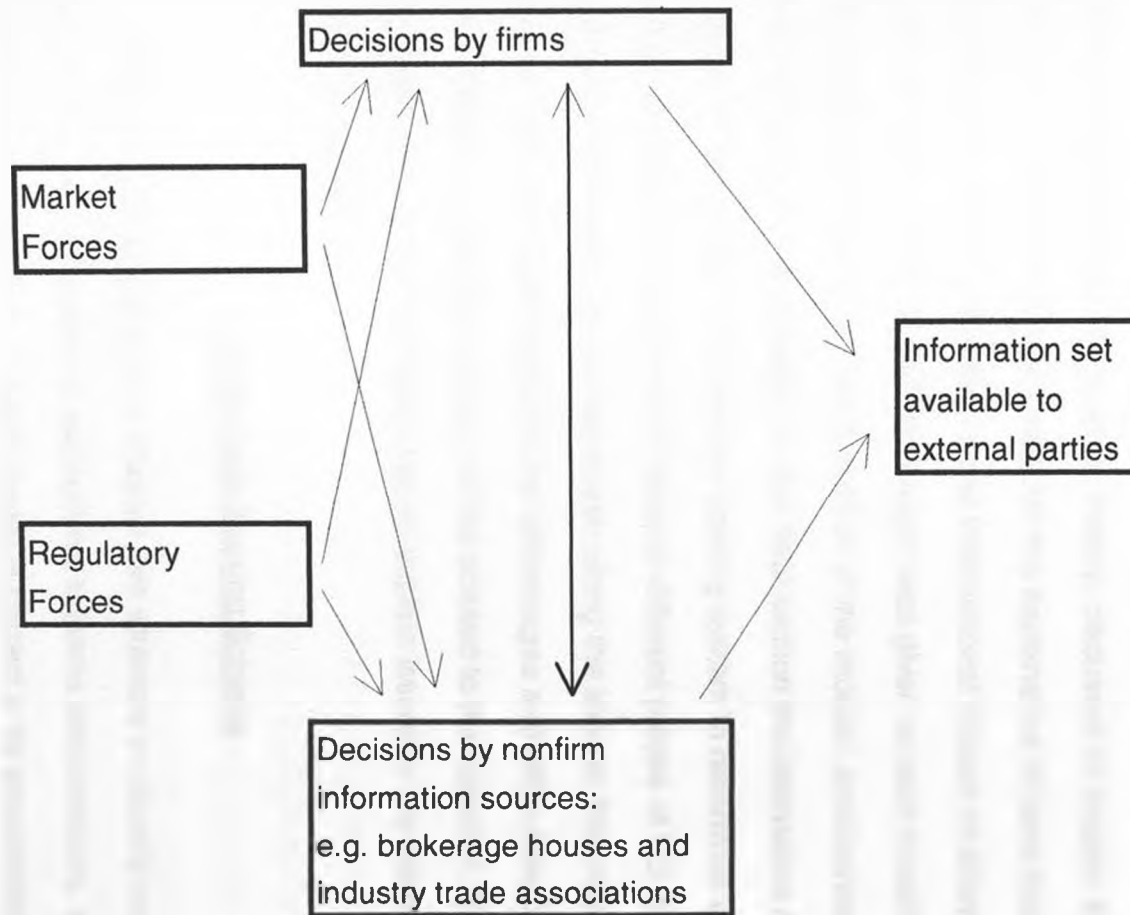
regulatory forces based in national governments play a large role in affecting the supply of accounting information and the form that information takes.

While the influence of regulatory forces on the disclosure of certain accounting information is hard to isolate and identify, strong evidence exists around the world that "specific disclosures are best explained as the result of a regulatory mandate" [Foster, 1986]. For example in Germany reporting entities are required to provide consolidated financial statements. This is a direct effect of the EC Seventh Directive requiring that all firms described in the text of the directive present consolidated accounts. Formerly German firms did not present consolidated accounts. In this case, regulatory forces provide much of the impetus for disclosure of accounting information.

Thus, regulation theory provides us with a model, based in economics, that describes the processes of, and reasons for regulation. Regulation theory also suggests a model that describes where the rules of a market come from, and what party has a stake in the changing or maintaining of those rules. More importantly, regulation theory provides another way in which to look at the current situation in the EC and evaluate events in Europe.

Exhibit 6

Factors Affecting Information Set Available to External Parties



Source: Foster [1986]

## SCORING AND COMPARING THE CLASSIFICATION MODELS

To see if the four alternative models are consistent with one another, and to test their consistency with how events they attempt to explain actually unfold, an analytical comparison of the subjective models follows. The four models in chapter two represent alternative ways to study and explain issues in international accounting. Regulation theory, discussed in chapter three, represents a widely accepted model for the explanation of rules related to accounting information, whether in the international theater or otherwise. In chapter two some short analytical thought was given to each model with respect to the general problems apparent in each of the models, and caveats were noted concerning each of the models. In this final section the alternative models will be compared to each other via a simple scoring system to determine whether or not they are consistent in outcomes of several different pieces of EC legislation. This scoring will lead to more discussion along the lines of the critical analysis as done in chapter two with regard to the advantages and difficulties of using each model. Finally, a possible answer will be posited to the question, "do any of these alternative models actually help to explain issues in the international accounting arena?"

### Systematic Scoring Scheme

Each model introduced in chapter two attempts to classify countries into groups on the basis of national accounting systems and practices, and are based on differing criteria. If each model is correct in its assumptions, each model should be capable of pointing out the direction any particular EC country will go when voting on legislation. Ideally, each of the model's predictions could

then be compared on the basis of a test group of countries. Such a test, as done here, compares each model to the others on the basis of predictions among the models, as well as to what actually happened in the EC with respect to final legislation. The scoring and comparison system is explained below.

Seven countries were picked on the basis of the influence each has in affecting final EC legislation. These countries are the UK, France, Germany, and Italy (each having 10 votes on the EC Council); Spain (8 votes); Belgium and the Netherlands (each having 5 votes)[Price Waterhouse, 1991a]. The first five were chosen for their voting size on the EC Council, as was Spain, with Belgium and the Netherlands included as representatives of the countries with lesser voting power. Note that these countries are not intended to represent any type of EC wide sample of countries. Rather, these countries are no more than just the countries with the most weight with regard to developing and enacting EC legislation, with the smaller countries randomly chosen and included merely for purposes of comparing the four models.

Five drafts of the Fourth and Seventh Directives are used as bases of comparison (the final and 1976 drafts of the Seventh Directive, and the 1971, 1974 and final drafts of the Fourth Directive). The Fourth Directive is broad in scope and defines the foundations of accounting in the EC with rules on the measurement and disclosure of information. The Seventh Directive is focused on the disclosure of consolidated accounts for firms that are based in EC member nations. While each of the drafts taken individually are nothing more than revisions of the final Directives, each draft represents a fairly large departure from the previous draft in terms of content. Thus, each model is expected to differentiate between the drafts of each directive, and to have similar predictions about the reactions of each country with respect to a particular draft.

The information about the differences between the drafts, especially with regard to content and the country having the most influence on content, is in Nobes' 1991 book *Accounting Harmonization in Europe: Towards 1992*. Also, significant portions of information about the reactions of countries to different drafts of each directive are in the Price Waterhouse publication entitled *EEC Bulletin "special supplement on the EEC Seventh Directive"* [1983].

The scoring of each of the models is relatively simple in nature. A systematic scoring scheme is used such that a positive one means the model predicts a vote for acceptance, zero means not enough information is given by the model to predict a reaction, and negative one means the model predicts a vote for rejection of the particular draft. Note that the actual passage of a Directive, and the voting of a particular country could possibly be explained by other phenomenon such as trading votes between the countries on non-related issues. This is discussed further in the section on problems with scoring.

### Scoring the Models

The problems with the models that were brought out in the discussion of the different models in chapter two became readily apparent during the scoring each directive vis-a-vis each country. In scoring each model an attempt was made to focus only on information provided by a particular model, and on a particular draft proposal. The results of the scoring based on each model appear in exhibits 7, 8, 9, and 10. Often the voting on a particular issue may not be decided by majority. Rather, consensus is often the goal to be reached before the passage of a Directive. However, this scoring scheme is still pertinent, and the "majority" outcomes that are illustrated are useful for comparative purposes.

### Mueller's Classification Scores

As noted in chapter two, Mueller's model is difficult to use as it does not offer much information on the bases for classification. The use of Mueller's model to score each draft of a particular directive is limited due to the many "different" business environments that Mueller identifies and uses for his classification and the many assumptions that must be made in using the model. There is little basis for judging whether a particular draft proposal for a directive is in line with a particular business environment set or not. Thus, the user of Mueller's original classification scheme must assume a lot in the way of "placing" a directive proposal among the business environments in his model. The results of just such an attempt appear in exhibit 7.

In the final scoring of the drafts by country using Mueller's classification there were many assumptions made to reach the scores reported in exhibit 7. In general the countries fell into four groups for Mueller: the Continental Europe Group (which includes France, Italy, Spain, and Belgium), Germany, the UK, and the Netherlands. Thus, when a particular country has a great deal of influence on a draft proposal for a directive (e.g. Germany had a large influence on the 1971 draft of the Fourth Directive), that particular draft is assumed to fall into that country's group. This is seen in the scoring for the 1971 draft of the Fourth Directive (see footnote (a) for exhibit 7)[Nobes, 1990]. Since Germany had a great deal of influence on its formulation of the 1971 draft Mueller's model suggests that all countries would reject that draft except Germany. However, for the 1974 draft of the same directive the UK had a great deal of influence (i.e. adding the 'true and fair' principle) and thus Mueller's model suggests a wider acceptance of the draft (see scoring on exhibit 7)[Nobes, 1990]. The scoring for

the other pieces of legislation follow this trend with the final drafts of each directive predicted by Mueller's model to have widespread acceptance among the seven countries.

A large assumption that was made is that all of the countries that fall into Mueller's "Continental Europe" group follow each other in accepting or rejecting EC legislation. Such an assumption can be dangerous to make due to the inherent differences in national accounting systems among the countries, even if they do fall into the same group in the model. This is another point that must be kept in mind when using Mueller's model.

Mueller's model is especially difficult to use because of the vagueness of the business environment "sets" that he identifies and bases his classification on. The assumptions that appear to underlie the model are too broad and undefined to facilitate an in-depth prediction of the outcome of any piece of legislation. As noted above (and illustrated in the footnotes to exhibit 7) the number of assumptions that the user of Mueller's model must make inhibit the predictive power of the model. However, the user of Mueller's model must not forget that he was one of the first to point out the possibility of classifying countries on the basis of national accounting systems and their environments. This fact has merit in itself if for no other reason than it helped to spur the investigation of alternative models that help to explain the international accounting arena.

Nobes' model, as noted in chapter two, exhibits some of the same problems that Mueller's does. Mainly, aligning any particular piece of EC legislation with a particular classification in Nobes' model is extremely subjective. Thus, every score in exhibit 8 is based on assumptions about the content and placement of each draft of the directives. These assumptions could vary widely from user to user. Also, one cannot use Nobes' model without some prior knowledge of how each country being studied falls in relation to Nobes' six points of differentiation noted in chapter two. Note that Italy scored zeros on all of the alternatives for the Fourth Directive due to insufficient prior knowledge of its national accounting system. Moreover, on the Seventh Directive alternatives, the scores are based strictly on the *de facto/de jure* control criterion as a major deciding point for the different drafts. This assumption, when using Nobes' model, must lead the user to identify a directive draft as either in the same group as a particular country (who would then be predicted to accept it), or not in the same group as a particular country (and thus the opposite conclusion is reached).

Some interesting points are illustrated by the scores that are computed using Nobes' model. Foremost, Nobes' model does predict that a majority of the countries would accept the final drafts of each Directive. This compares to the same conclusion reached using Mueller's classification scheme. However, by slightly changing the assumptions, differing results could easily be attained. Strictly speaking, if a particular draft of a directive was placed in alignment with one "family" of national accounting system, then the model user would have to conclude that countries that fell in "families" other than that of the directive would reject the directive as being too different. This assumption was not made when using Nobes' model, and thus facilitates the prediction of positive scores using

Nobes' model due to the possibility of then linking different families in the same sub-class as similar enough to vote the same on legislation.

Both Nobes' and Mueller's models are at odds with each other on the scoring of the final draft of the Fourth Directive, and both are at odds with the outcomes of the other two models.

### Puxty Model Scores

Puxty's model represents the first of the alternative models explored that offers a spatial comparison between different classifications of national accounting systems. This offers the opportunity to compare countries on the basis of their placement vis-a-vis the placement of a particular piece of EC legislation, and to see "how far" a country has to change to incorporate that legislation, thus arriving at some prediction for acceptance/rejection of EC legislation by a particular country (see exhibit 11). Interestingly, as seen in exhibit 9, Puxty's model is also the first to score the final drafts of each directive in a manner that predicts that most of the test countries would reject them.

Using Puxty's model presents some unique problems when tackling the question of whether a country will accept or reject a piece of EC legislation. As noted in chapter two, Puxty's model is based on elements that are subject to change over time and thus does not capture the position of each country's accounting system for a long period of time. Where exactly a nation's accounting system falls on the model must be assumed. Puxty admits that the components of a nation's accounting system that determine where that nation gets placed on the model can change, and often do, over time. Obviously the model becomes more unreliable in predicting how a country will react to any change in accounting practices in the future. However, if Puxty's model was

used as a snapshot of a country at a particular place in time (similar to a balance sheet), changes in systems could be noted and measured in some manner. Such a use could prove useful for building an alternative model having genuine predictive power, rather than one that merely hypothesized on subjective elements in an accounting system.

Because of the number of options in the final drafts of each Directive (as noted by Gernon and Bindon [1992]), and because of the power of the EC as an outside force on each nation's accounting system, Puxty's model can be very inaccurate at predicting the acceptance of particular pieces of EC legislation. Indeed, Puxty's model predicts that for the final draft of the Fourth Directive, most of the test countries would reject it (based on the positioning of most of the countries in the legalism corner as indicated in exhibit 11). This indicates a fault in the model, but may also be due in part to other forces acting on the nations' accounting systems that are not included (which is itself a fault of the model). Gernon and Bindon [1992] illustrate in their paper on accounting diversity in the EC, Puxty's model may be reshaped to include the influence of the EC as a legislative body (which they term "Europeanism") on the accounting practices of each member nation. This would probably improve the predictive power of the model for Directives such as the Seventh, which follow in the wake of the influence of prior directives.

The problem of not taking the influence of the EC as a force on national accounting systems into account leads to two problems. First, the legislative process and its outcomes are treated as a point in the model rather than an influencing factor on countries in the model. Thus, particular pieces of EC legislation may be mistakenly forced into a position on the model in which they do not belong. Second, as noted in exhibit 11, the number of options available in

each model prohibit the placement of each draft as one point in the model, thus, the final drafts of each directive are placed as regions rather than points on the model.

The value of Puxty's model comes in the possibility of its use to spatially compare countries. While there is no real way to measure the distances on the model between the countries, the idea of such a comparison is useful as a conceptualization tool. The user of the model can get an immediate "feel" for the differences among studied countries just by looking at the distances between each country. However, as a prediction tool, the model falls short in the area of precision.

#### Gray's Model Scores

Gray's model offers the same opportunity for spatial comparison of the countries. Also, Gray's model differentiates between measurement and disclosure issues, differences that were shown by Nair and Frank [1980] to be so important in the classification process. As well as the same strong points, Gray's model suffers from many of the same problems that Puxty's does as far as placement of the directive drafts on the model (see exhibits 12 and 13). However, Gray's model seems to be a step in the right direction as far as facilitating the actual measurement of the differences between nations' accounting systems on the basis of some stated criteria. This conclusion is reached in part due to the work that Hofstede did in actually measuring the Power Distance, Uncertainty Avoidance, and Individualism axes (see chapter two).

The interesting points of Gray's model come in comparing countries with the position of the drafts of each directive. As seen in exhibit 10, Gray's model

predicts that the final drafts of both the Fourth and the Seventh Directives would be rejected. Obviously they have not been rejected. This discrepancy could be attributed to a number of elements involved in the study of EC legislation (such as log rolling). The foremost problem, as seen in the placing of regions for the final drafts rather than points, is that the number of options included in each directive nearly necessitates the study of each different "bundle" of options as a separate piece of legislation. This would facilitate the prediction of correct outcomes by Gray's model, but would also just reinforce the intuitive conclusion that each member state in the EC will choose the set of options for each directive that most closely matches its own accounting system.

#### Comparing all Four Models

The models all exhibit similar problems, which lead to different predictions among them. The largest problem with all of the models is one of precision. Indeed, each model is little more than a compilation of a set of assumptions about what governs the formation and continuation of national accounting systems. Since no real empirical work has been done to substantiate any of the models, the scoring here is rudimentary at best in judging the accuracy and validity of each model.

Differences between the models' predictions indicates little. Both Nobes' and Mueller's models predict the acceptance of each of the final drafts by most of the countries. However, as alluded to earlier, this outcome could be just as much based on the application of the models as on the accuracy of the models. That all four models predict dissimilar outcomes as to the acceptance or rejection of the final drafts indicates that the assumptions underlying the models may be incorrect, or need refining.

The inaccuracies of the models in the area of prediction are counterbalanced by the value of the models as conceptual tools. Working from Mueller's model through to Gray's each becomes successively more complex and illustrative about how different nations' accounting systems fall in relation to one another. Both Puxty's and Gray's models are excellent tools for gaining a "feel" for the relative position of one country to another on the basis of accounting systems. The models aid in the conceptualization of accounting systems that are foreign to the reader, which is arguably as important as the predictive power of the models, especially if the goal is trying to compare the accounting foreign entities. Regulation theory does not offer the type of "hands on" aid to understanding the relationships between countries that the more subjective models of chapter two offer. That all models should relate to actuality is an unarguable point. These models provide an alternative link between general theory and what is really going on in the accounting information market.

### Problems with Scoring using the Models

While every attempt has been made here to remain objective in analyzing and comparing the models, there is still some level error that will be associated with any such subjective test of these alternative models. More specifically, the point at which each country "flips" from accepting to rejecting a particular draft (of vice versa) is a totally subjective. As illustrated in the Germany column of exhibit 9 and on exhibit 11, one could easily argue that the position of B relative to legalism could fall closer than it has been placed in the exhibit, which would lead to Germany accepting the 1974 draft rather than rejecting it. The question is where to draw the line that defines the limit to which countries will go in accepting directive proposals that are different. Again the problem of trading

votes between the countries comes into play, as well as the issue of consensus as a goal for passage of directives, as discussed below.

The scoring system used here is rudimentary at best. Some problems indicated by the scoring scheme could be attributed to elements in the legislative process in the EC such as vote trading by Council members on economic issues that are totally unrelated. The task of allowing for, and attempting to eliminate, this possibility is far beyond the scope of the models to deal with in current form, and is beyond the scope of this work, which is to compare the models as alternatives to traditional economic theory.

Scores using Mueller's  
Classification Scheme

|                                       | FR                 | GE                 | IT                 | UK                 | SP                 | NE                 | BE                 |
|---------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Fourth Directive - 1971 Draft:        | <sup>a</sup><br>-1 | <sup>a</sup><br>1  | <sup>a</sup><br>-1 | <sup>a</sup><br>-1 | <sup>a</sup><br>-1 | <sup>a</sup><br>-1 | <sup>a</sup><br>-1 |
| Fourth Directive - 1974 Draft:        | <sup>b</sup><br>1  | <sup>b</sup><br>1  | <sup>c</sup><br>1  | <sup>c</sup><br>1  | <sup>e</sup><br>1  | <sup>d</sup><br>1  | <sup>e</sup><br>1  |
| Fourth Directive - 1978 Final Draft:  | <sup>b</sup><br>1  | <sup>b</sup><br>1  | <sup>c</sup><br>1  | <sup>c</sup><br>1  | <sup>e</sup><br>1  | <sup>d</sup><br>1  | <sup>e</sup><br>1  |
| Seventh Directive - 1976 Draft:       | <sup>f</sup><br>-1 | <sup>g</sup><br>1  | <sup>f</sup><br>-1 | <sup>f</sup><br>-1 | <sup>f</sup><br>-1 | <sup>f</sup><br>-1 | <sup>f</sup><br>-1 |
| Seventh Directive - 1983 Final Draft: | <sup>h</sup><br>1  | <sup>i</sup><br>-1 | <sup>h</sup><br>1  | <sup>i</sup><br>1  | <sup>h</sup><br>1  | <sup>i</sup><br>1  | <sup>h</sup><br>1  |

*Footnotes indicate logic behind each score*

BE Belgium

FR France

GE Germany

IT Italy

NE Netherlands

SP Spain

UK United Kingdom

1 > Country will accept  
draft based on model

0 > Not enough information  
in the model to make  
a prediction

-1 > Country will reject  
draft based on model

a- Due to the origin of the 1971 draft (i.e. German Law), which is in a separate category from the rest of the countries.

b- Due to the similarity of practices (i.e. law oriented).

c- Due to the UK influence on 1974 draft and the 1978 final draft.

d- Due to grouping with former British commonwealth countries.

e- Due solely to placement in the "Continental Europe" group.

f- Since the 1976 draft was for de facto consolidation (which was similar to German practice) all those assumed through Mueller's model to accept the final Seventh Directive (which requires de jure consolidation) are assumed to go against the 1976 proposal. This assumes that the deciding factor on acceptance/rejection of the Seventh Directive is the question of defacto/dejure control as the basis for requiring consolidation.

g- As in f, since Germany was already using de facto control as the criterion for consolidation, the draft based on this principle is assumed to be accepted by Germany.

h- These are all in the "Continental Europe" group and are assumed to have the same views in Mueller's model.

i- The UK already had a consolidation requirement similar to the Seventh Directive final draft.

j- Germany had de facto control criterium which differs from the final draft dejure criterium.

Scores using Nobes'  
Biological Classification

|                                       | FR                  | GE                 | IT                 | UK                 | SP                 | NE                 | BE                 |
|---------------------------------------|---------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Fourth Directive - 1971 Draft:        | <sup>b</sup><br>1   | <sup>a</sup><br>1  | <sup>*</sup><br>0  | <sup>a</sup><br>-1 | <sup>b</sup><br>1  | <sup>a</sup><br>-1 | <sup>b</sup><br>1  |
| Fourth Directive - 1974 Draft:        | <sup>b,c</sup><br>1 | <sup>d</sup><br>-1 | <sup>*</sup><br>0  | <sup>c</sup><br>-1 | <sup>b</sup><br>1  | <sup>e</sup><br>0  | <sup>b</sup><br>1  |
| Fourth Directive - 1978 Final Draft:  | <sup>b,c</sup><br>1 | <sup>d</sup><br>-1 | <sup>*</sup><br>0  | <sup>c</sup><br>-1 | <sup>b</sup><br>1  | <sup>e</sup><br>0  | <sup>b</sup><br>1  |
| Seventh Directive - 1976 Draft:       | <sup>f</sup><br>-1  | <sup>f</sup><br>1  | <sup>f</sup><br>-1 | <sup>f</sup><br>-1 | <sup>f</sup><br>-1 | <sup>f</sup><br>-1 | <sup>f</sup><br>-1 |
| Seventh Directive - 1983 Final Draft: | <sup>f</sup><br>1   | <sup>f</sup><br>-1 | <sup>f</sup><br>1  | <sup>g</sup><br>1  | <sup>f</sup><br>1  | <sup>g</sup><br>1  | <sup>f</sup><br>1  |

Footnotes indicate logic behind each score

BE Belgium  
FR France  
GE Germany  
IT Italy  
NE Netherlands  
SP Spain  
UK United Kingdom

1 > Country will accept  
draft based on model

0 > Not enough information  
in the model to make  
a prediction

-1 > Country will reject  
draft based on model

\* Without prior knowledge of a particular nation's accounting principles and basis (i.e. common or code law) Nobes' model is difficult to use for prediction purposes. Note that Italy's scores are 0 due to that lack of prior knowledge.

- a- Since the 1971 draft was based so heavily on German law, only other countries in the 'Spieces' are assumed to accept this draft.
- b- Germany and the other countries in Nobes' Continental 'sub-class' are assumed to group together as far as predicted acceptance of a particular draft.
- c- Due to the presence of uniform account formats, which historically do not match the UK's "pragmatic" accounting principles.
- d- Due to the "true and fair" clause and the different 'Class' of the UK (the originator of the "true and fair" view in this draft) and Germany.
- e- Due to the presence of uniform accounting formats, pragmatic "true and fair" principles, and limited prior knowledge of Dutch accounting practices a score is not readily apparent.
- f- Based on the de facto/de jure control criterium question (i.e. Germany's prior criterium for consolidation was defacto control, while all other nations' was dejure control). Also, France, Spain, and Belgium are all in the 'Plan Family, which lead to the prediction that they will group together in accepting or rejecting a draft.
- g- Due to the large UK and Netherlands input into the main provisions of the final draft.

## Exhibit 9

## Scores using the Puxty Model

|                                       | FR                 | GE                 | IT                 | UK                 | SP                 | NE                 | BE                 |
|---------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Fourth Directive - 1971 Draft:        | <sup>a</sup><br>1  | <sup>a</sup><br>1  | <sup>a</sup><br>1  | <sup>a</sup><br>-1 | <sup>a</sup><br>1  | <sup>a</sup><br>-1 | <sup>a</sup><br>1  |
| Fourth Directive - 1974 Draft:        | <sup>b</sup><br>-1 | <sup>b</sup><br>-1 | <sup>b</sup><br>-1 | <sup>b</sup><br>1  | <sup>b</sup><br>-1 | <sup>b</sup><br>1  | <sup>b</sup><br>-1 |
| Fourth Directive - 1978 Final Draft:  | <sup>c</sup><br>-1 | <sup>c</sup><br>-1 | <sup>c</sup><br>-1 | <sup>c</sup><br>1  | <sup>c</sup><br>-1 | <sup>c</sup><br>1  | <sup>c</sup><br>-1 |
| Seventh Directive - 1976 Draft:       | <sup>d</sup><br>1  | <sup>d</sup><br>1  | <sup>d</sup><br>1  | <sup>d</sup><br>-1 | <sup>d</sup><br>1  | <sup>d</sup><br>-1 | <sup>d</sup><br>1  |
| Seventh Directive - 1983 Final Draft: | <sup>e</sup><br>1  | <sup>e</sup><br>1  | <sup>e</sup><br>1  | <sup>e</sup><br>1  | <sup>e</sup><br>1  | <sup>e</sup><br>1  | <sup>e</sup><br>1  |

Footnotes indicate logic behind each score

BE Belgium

FR France

GE Germany

IT Italy

NE Netherlands

SP Spain

UK United Kingdom

1 > Country will accept  
draft based on model

0 > Not enough information  
in the model to make  
a prediction

-1 > Country will reject  
draft based on model

- a- As illustrated in figure 5-4 of the Puxty model, the heavy influence of German law on this draft places is high in the Legalism corner of the model, and therefore leads to the conclusion that only those countries that fall near the same corner would accept this draft. See (C), figure 5-4.
- b- Similar to (a), as illustrated in figure 5-4, the proximity of the draft to the legalism corner leads to the conclusion that only the "legalist" countries would accept the draft. See (D) in figure 5-4.
- c- Due to the heavy influence of the UK and the Netherlands on the final draft, which is placed at (E) in figure 5-4, the model indicates the scores shown.
- d- Due to continental influence and lack of British or Dutch influence, this draft falls near the Legalism corner, with the same conclusions as in (a) and (b) above. See (B), figure 5-4.
- e- Due to the number of options allowed in the Seventh Directive, and the amount of British and Dutch influence on the final draft, (A) falls in a range, and thus these scores are based on that range.

## Exhibit 10

## Scores using Gray's model\*

|                                       | FR | GE | IT | UK | SP | NE | BE |
|---------------------------------------|----|----|----|----|----|----|----|
| Fourth Directive - 1971 Draft:        | 1  | 1  | 1  | -1 | 1  | -1 | 1  |
| Fourth Directive - 1974 Draft:        | -1 | 1  | -1 | -1 | -1 | -1 | -1 |
| Fourth Directive - 1978 Final Draft:  | -1 | -1 | -1 | 1  | -1 | 1  | -1 |
| Seventh Directive - 1976 Draft:       | 1  | 1  | 1  | -1 | 1  | -1 | 1  |
| Seventh Directive - 1983 Final Draft: | -1 | -1 | -1 | 1  | -1 | 1  | -1 |

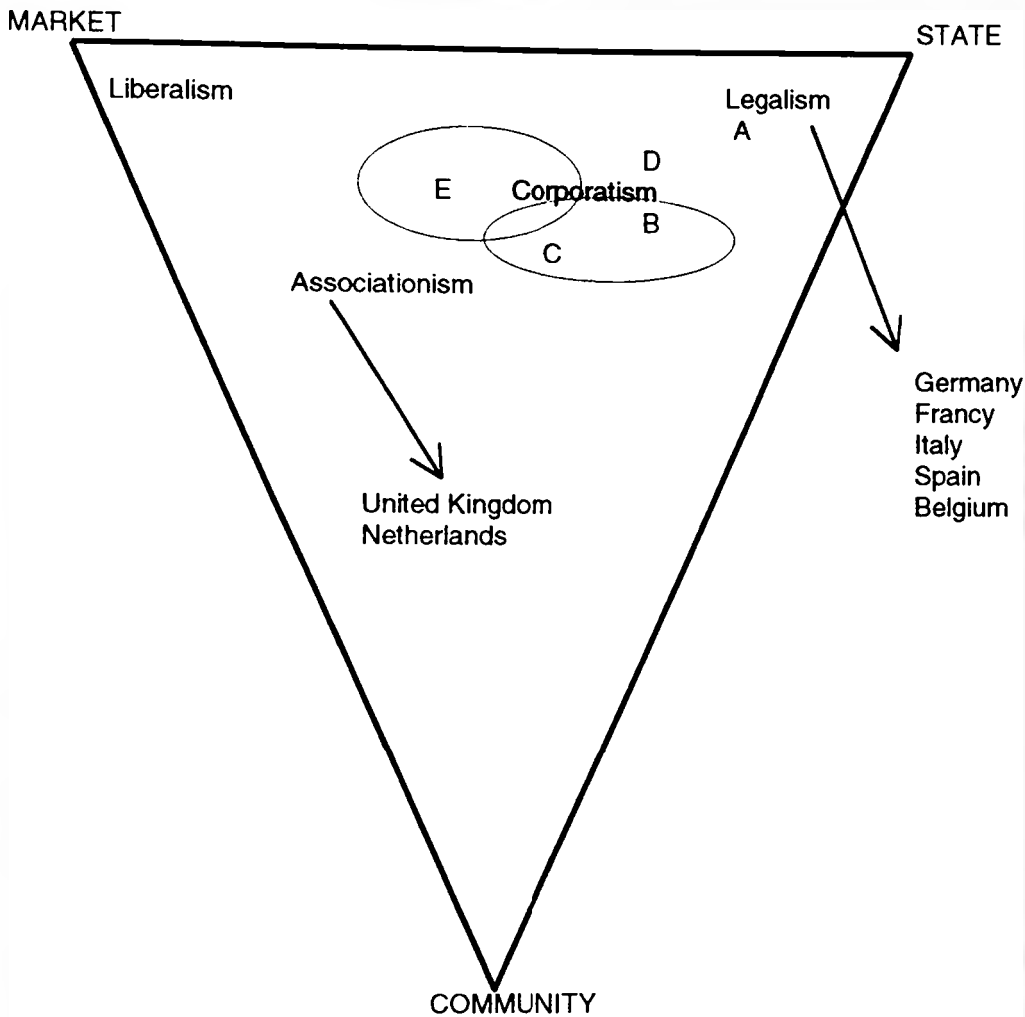
BE Belgium  
 FR France  
 GE Germany  
 IT Italy  
 NE Netherlands  
 SP Spain  
 UK United Kingdom

1 > Country will accept  
 draft based on model

0 > Not enough information  
 in the model to make  
 a prediction

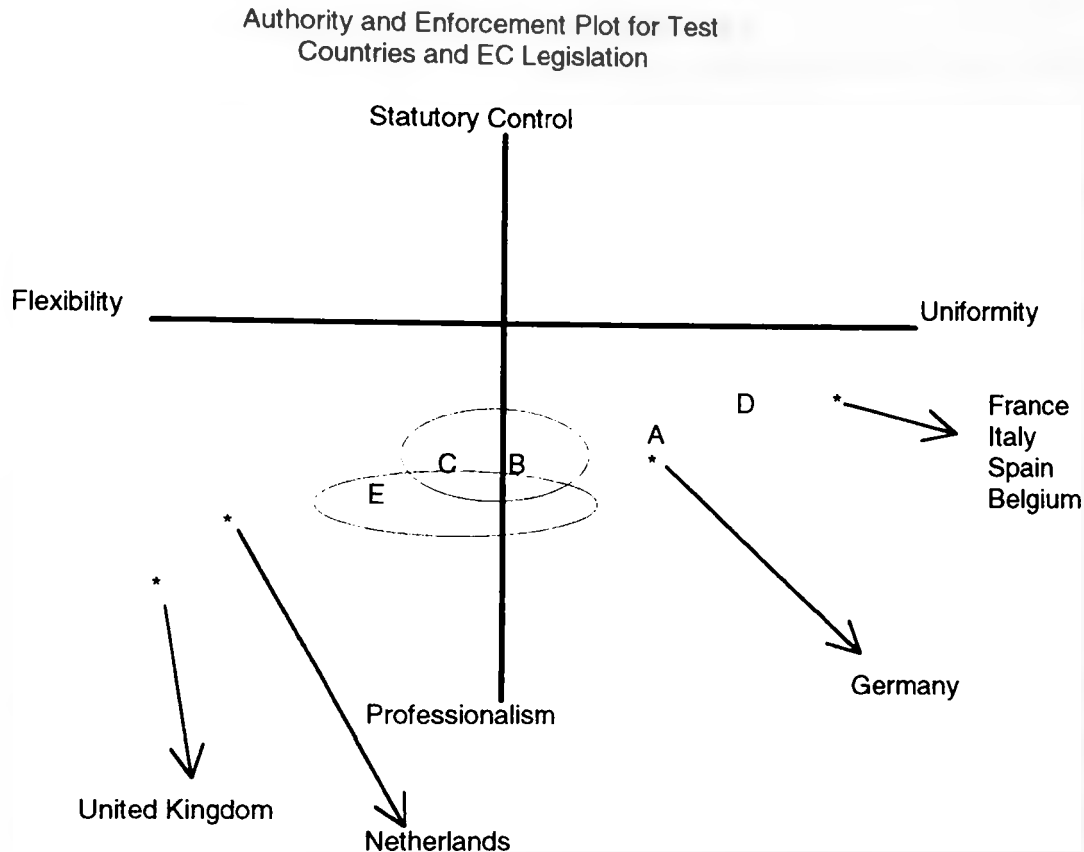
-1 > Country will reject  
 draft based on model

\* Each score is based on subjective judgement about how far a particular nation will "reach" to accept a draft that is not nearly the same as a current system of accounting. See exhibits 12 and 13 for an illustration of the "distances" involved.

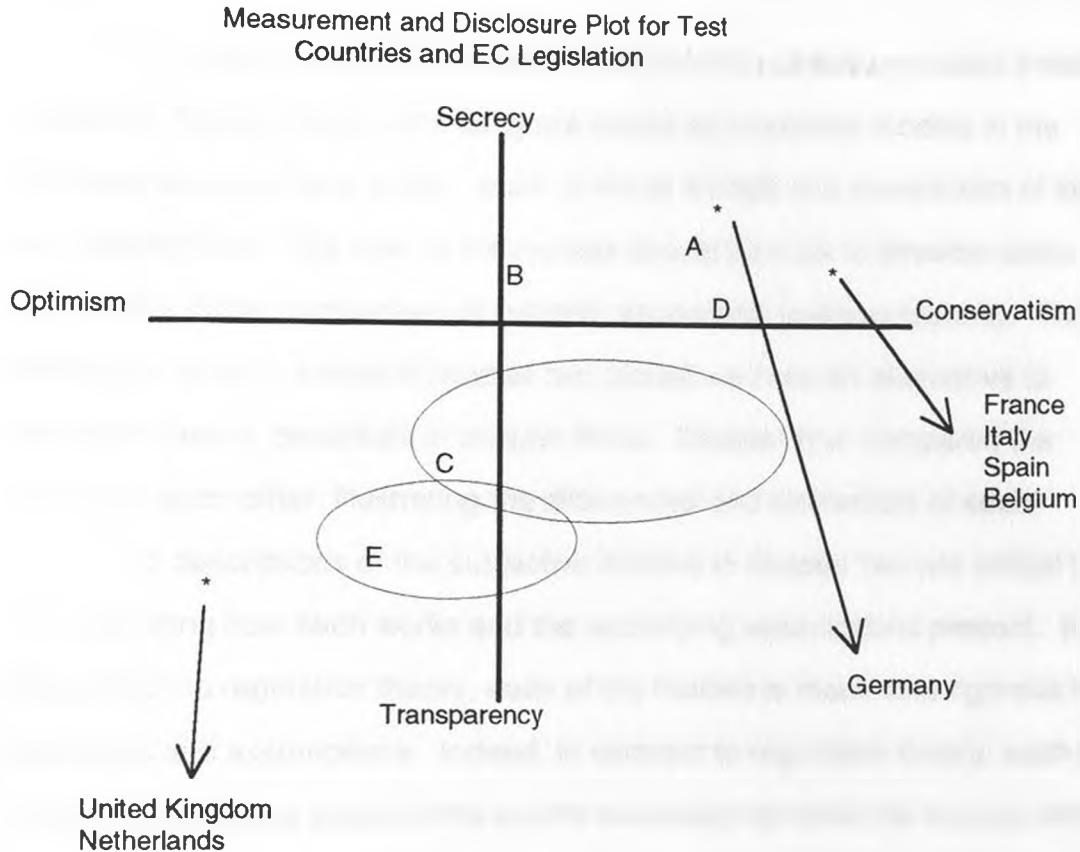


Puxty et al, 1987.

- A = 1971 Fourth Directive Draft: Falls here due to the heavy German influence.
- B = 1974 Fourth Directive Draft: Falls here due to the initial German influence, and the UK (Associationism) influence on this particular draft.
- C = 1978 Final Fourth Directive: Falls here due to increasing UK influence. Note that the number of options included in the final draft of the Fourth Directive inhibits placing it as a point on the model; thus the circle denotes the "range" of options available.
- D = 1976 Seventh Directive Draft: Falls here due to the de facto control criterium found in the Germany influence on the draft.
- E = 1983 Final Seventh Directive: Falls here due to the increased UK influence on the final draft, which included the de jure criterium for control and consolidation.



- A = 1971 Fourth Directive Draft: Falls here due to the heavy German influence.
- B = 1974 Fourth Directive Draft: Falls here due to the initial German influence, and the subsequent UK influence on this particular draft.
- C = 1978 Final Fourth Directive: Falls here due to the amount of UK influence. Note that the number of options included in the final draft of the Fourth Directive inhibits placing it as a point on the model; thus the circle around (C) denotes the "range" of options available in the Directive.
- D = 1976 Seventh Directive Draft: Falls here due to the de facto control criterium found in the German law influence on the draft.
- E = 1983 Final Seventh Directive: Falls here due to the British influence on the final draft, which included the de jure criterium for control in consolidation. Note the number of options included in the final draft of the Seventh Directive inhibits placing it as a point on the model, similar to (C) above; thus the elongated circle denoting the "range" of options available in the Directive for member nations to implement.



- A = *1971 Fourth Directive Draft*: Falls here due to the heavy German influence.
- B = *1974 Fourth Directive Draft*: Falls here due to the initial German influence, and the subsequent UK influence on this particular draft.
- C = *1978 Final Fourth Directive*: Falls here due to the amount of UK influence. Note that the number of options included in the final draft of the Fourth Directive inhibits placing it as a point on the model; thus the circle around (C) denotes the "range" of options available in the Directive.
- D = *1976 Seventh Directive Draft*: Falls here due to the de facto control criterium found in the German law influence on the draft.
- E = *1983 Final Seventh Directive*: Falls here due to the British influence on the final draft, which included the de jure criterium for control in consolidation. Note the number of options included in the final draft of the Seventh Directive inhibits placing it as a point on the model, similar to (C) above; thus the elongated circle denoting the "range" of options available in the Directive for member nations to implement.

## SUMMARY OF FINDINGS AND CONCLUSIONS

This paper has addressed whether the more subjective models introduced by Mueller, Nobes, Puxty, and Gray are useful as predictive models in the international accounting arena. Each of these models is a compilation of ideas and assumptions. The user of the models should be able to develop useful conclusions in the comparison of national accounting systems globally. The description of each model in chapter two placed each as an alternative to regulation theory, described in chapter three. Chapter four compared the models to each other, illustrating the differences and similarities of each.

The descriptions of the subjective models in chapter two are critical to understanding how each works and the underlying assumptions present. In comparison to regulation theory, each of the models is much less rigorous in its definitions and assumptions. Indeed, in contrast to regulation theory, each has not been empirically tested to the extent necessary to make the models more precise. Thus, the scoring done in chapter four was rudimentary at best, due to the number and power of other elements that may be working on the results of voting by the EC Council besides just the accounting system background of each country. These elements include 1) the possibility of votes being traded on unrelated issues between the ministers on the Council; 2) the lack of information available about the true "feelings" of each minister as a representative of each member nation; and 3) the possible perception of need for consensus among the members when voting on particularly sensitive directives, such as the Fourth and the Seventh. Further, an assumption that must be made to score these models is that the "true" preferences of the Council members with regard to EC accounting issues alone are known, holding all other elements constant. Even so, the models have been scored in exhibits 7 - 10.

The scoring of the models was difficult due to the number of assumptions that made in the process. These assumptions are included on each figure as an explanation for each score in the figures themselves. Problems included: 1) deciding where to place each draft of the two directives, and 2) where to "draw the line" past which a particular nation's vote would turn from acceptance to rejection or vice versa when a Directive is not the same as a nations' current system of accounting. The subjectivity involved in placing countries and EC legislative issues in the models when trying to predict how nations or groups in the EC will act when faced with decisions. The fact that these models are unsubstantiated by empirical work also weighs heavily against their predictive power. Lack of empirical work leave the models with only the creative theorizing of the model builder to stand on. These problems are elementary problems of the models which will face any user, and are problems that lead to the conclusion that the models are not well suited to predicting results of events in international accounting legislation. However, the models are in no way worthless to the accounting community.

Regulation theory was introduced in chapter three as the standard theory for predicting events in the accounting community globally. Supported by much empirical work, regulation theory seems to provide the international accounting researcher with a more solid method of understanding, and more importantly, predicting results of accounting legislation (i.e. legislation in the EC). The subjective models introduced here can be weighed by the reader against regulation theory on the bases of predictive power and validity. The scoring done in chapter four is meant to facilitate such a comparison as well as to compare the models to each other, as was done.

The subjective models are quite useful in understanding national accounting systems globally. The more graphic models are useful in gaining the "big picture" global conceptualization that is becoming increasingly important to the business person of today. Used as a tool to gain a quick understanding of the placement of national accounting systems in relation to one another, the subjective models are superior to regulation theory. There is little other work in the field of international accounting that offers the power of comparison between national accounting systems that these models do. The work done here indicates that the models are powerful in the conceptualization of different national accounting systems, and less suited to the predictions of events in the international accounting arena.

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