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Preference for top managerial positions as a result of utility-maximization behavior under religious moral prescriptions

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PREFERENCE FOR TOP MANAGERIAL POSITIONS AS A RESULT OF UTILITY-MAXIMIZATION BEHAVIOUR UNDER RELIGIOUS MORAL PRESCRIPTIONS

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THESIS ACCEPTANCE

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The analysis described in this study is focused on the influence of religious ethics over individuals' tendency to seek top-managerial positions in their professional activity. The analysis assumes agents maximize utility.

According to religious doctrines, afterlife salvation is a goal which could be accomplished only by following certain prescribed behavioural norms. While salvation can be considered as being an identical goal for most religions, the way of pursuing it differs from one religion to another.

This difference in means of attaining salvation reflects on various aspects of human behaviour. One of

these aspects is the professional conduct of people engaging in business related activities, which constitutes the focus of our investigation.

While Protestant and Judaic religions implicitly stimulate people to orientate themselves towards top-managerial position, Catholic and Orthodox religions discourage this orientation. Starting from this hypothesis, the topic was thoroughly investigated using both exploratory and descriptive research.

The final results constitute a partial support for the initial hypothesis. They are not to be seen as absolute conclusions, but as a perfectible contribution to a better understanding of the relationship between religious norms and the economic activities individuals engage in.

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Table of Contents

I. Introduction

Religion is one of the most pervasive phenomena in the human experience. Since virtually all societies throughout history engage in religious activity, it is surprising that economists give only limited attention to religion. While economic literature on religion is not very broad, it is long, dating back to Adam Smith who approaches the mutual causation between the economy and religion. Thus, while treating the church as a firm: "The clergy of every established church constitute a great incorporation" (1966, p. 207), he also points out the economic effects of the system of religious belief as reflected in individual behaviour.

The main purpose of this study is to analyse a possible causal relationship between religious moral norms and the orientation of individuals towards business top-managerial positions.

Some religious doctrines, by advocating that individuals should take control of their worldly destiny, give an implicit support to their followers in pursuing occupational positions which require a willful attitude, and a risk taking predisposition. On the other hand, other doctrines never rest in teaching people that

salvation in the afterlife can be attained only by adopting an obedient attitude. This affects individuals' preference for activities which do not require taking initiative.

However, in real economic life, we can find in top-managerial positions persons who belong to a large diversity of religious denominations. Particularly, in Romania we can find top managers who declare themselves as being Orthodox, Catholic, Jewish or Protestant believers.

How could we explain this situation?

It seems that Protestant and Jewish managers are "strong believers", while Orthodox and Catholic managers are rather "light believers" or even "deviants". They do not really identify themselves with the "ideal way of living" as prescribed by their religions.

II. Economics and Sociology

Since the topic of this paper is situated at the border between economics and sociology, it is necessary to begin by discussing the relationship between these two disciplines.

The history of this relationship is complex and ancient. Jean-Jacques Rousseau in his *Discourse of Political Economics* written for Diderot, discusses the many themes which today are considered relevant, for some to economics, and for others to sociology. The fundamental work of Adam Smith on *The Wealth of Nations*, generally considered as the starting point of economic science, also treats human behaviour beyond the boundaries of economics as they are currently conceived. Marx and Pareto, but also to a certain extent Max Weber, Schumpeter, and Durkheim are considered to be both sociologists and economists.

It is only with the development and the success of neo-classical economics that economics became institutionalized as a discipline almost completely independent of sociology.

Economics is distinguishable from sociology, to be sure, by its object. Its essential interest is the

production and circulation of goods and services while the objects which interest sociology are more diverse. But the two disciplines owe the reciprocal autonomy which is generally conceded to them less to the distinction between their objects than to the differences which traditionally separate some of their fundamental principles.

Economics - especially in its neo-classical vision - sees the economic subject, *homo oeconomicus*, as rational. In other terms, it assumes that his behaviour can be seen as the result of a calculation by which he seeks to maximize his *utility* - to maximize the *pleasure* and to minimize the *pain* - or, to use the language which conforms more to the usage of modern sociology, to make choices which accord with his *preferences*. In contrast, *homo sociologicus* is often, implicitly or explicitly, seen as irrational, that is to say as capable of being moved by neutral or negative forces, compared with his interest and his preferences. Thus Tarde considers that the two principal motivating forces of human action are *imitation* and *custom*. The former pushes men to adopt certain types of behaviour not because it is profitable to them or conforms to their preferences, but because it is new. The latter explains why traditions can be preserved even when they are of no benefit and have no significance for those who adopt them.

On the other hand, while economists generally obey

the principle of methodological individualism - i.e., considering that a phenomenon is analysable and comprehensible as the result of individual behaviour -, sociologists sometimes deny this principle and follow a holistic approach - i.e., postulating that individual behaviour must fundamentally be seen as the consequence of social structures which are thus put forward as primary in the order of explanation. But, overall, care must be taken not to exaggerate the contrasts: economists are well aware that behaviour obeys constraints and that these are fixed by structures.

Using these two dichotomous criteria above (rationality/irrationality, individualism/holism), Raymond Boudon and François Bourricaud (1989, p. 141) have determined a typology with four elements shown in table 1.

	Individualism	Holism
Rationality	Type 1	Type 2
Irrationality	Type 3	Type 4

Table 1. A typology of human behaviour.

Type 1 describes the axiomatic in human behaviour, above all used by the economists and sometimes employed by sociologists, and it is largely represented in one of

the next chapters. The three other types are more characteristic of particular forms of sociology.

Type 2 is represented by certain forms of Marxist or neo-Marxist sociology. Thus, numerous descriptive analyses of capitalism belonging to this movement of thought see *social structure* as essentially characterized by the existence of two classes, the *dominant class* and the *dominated class*. The interests of individuals belonging to the dominant class are supposed to be convergent; with the result that in serving their own individual interest they serve at the same time their class interest. In addition, the dominant class, having control of the social structure and being capable of imposing collective norms and values which conform with its interests, the members of the dominated class have no other solution except resignation. Also, in the prescriptive papers with reference on socialism, these authors prescribe an individual behaviour driven by social interests which, once satisfied, in turn will satisfy the individual interests.

Type 3 can be seen as characteristic of Tarde's sociology. In effect, this author explicitly declares: 1) that social phenomena can only be seen as the consequence of individual actions; 2) that above all the sociologist must be concerned with *irrational actions*, that is to say

those which cannot be seen as resulting from the interests of actors. The *programme* thus outlined by Tarde has been put in operation by several modern sociologists. Thus, for Berger and Luckman, the sociologist must see social behaviour as the result of - or more exactly as guided by - collective images. But these images have sense and existence only in so far as they allow the actor to interpret his own situation and to confer significance on his projects.

Type 4 can be seen as characteristic of so-called structuralist sociologist. In this case, the actor is practically omitted from the analysis and is given the status of *structural support*. Thus, for Foucault, the history of the science itself can be explained, not by starting from the activity of the thinkers, but by the overbalancing of *epistemic structures* which periodically modify the representations that men make of the world. For Althusser, social structures impose roles on individuals which they are destined to carry out with servile fidelity.

At this point, it should be noted that the types which have just summarily described are ideals, that they are rarely represented in a pure state, and the distinctions holism/individualism, on one hand, and rationality/irrationality, on the other, must be seen as

relative. In effect:

1) The best sociologists go beyond the opposition of holism/individualism. Thus, de Toqueville considers that social structures do not determine the behaviour of actors but the constraints which demarcate and structure their field of action. According to the situation, the constraints are such that they hardly leave the possibility of choice to the actor. And, since the behaviour of actors can affect the social structures the result is often a circular relationship of cause and effect between structures and individual actions, which in principle does not permit structures to be considered as primary in the order of explanation.

2) Modern sociology, similarly to modern economics on its side, tends to shade the opposition introduced by Pareto and Weber, the former by his distinction between *logical actions* and *non-logical actions*, the latter by his distinction between *Zweckrationell* actions, on the one hand, and on the other hand, *Wertrationell*, *traditionell* and *affectuell* actions.

Today the tendency is to admit that the idea of rationality is readily definable only in particular cases. When the actor has to take a decision in conditions of uncertainty it can be difficult, both for the observer as for the actor himself, to determine the line of action which most closely conforms to the interest or the preferences of the latter.

On the other hand, economists recognize that the social actor generally acts under conditions of limited rationality, that is to say that generally he has at his command only a small part of the information which would be necessary for him to act in full knowledge of cause. Being unable to determine the consequences of the lines of action which are open to him, he will thus be constrained to trust his intuition, that is to say his beliefs which are likely to be suggested to him by one or other of his reference groups.

3) More generally: a) modern economics tends, in some of its aspects, to move aside from the classical model of a rational homo oeconomicus and to see him more as an example or a heuristic fiction; b) modern sociology tends for its part to reject a distinction between rational behaviour and irrational behaviour; c) sociologists and economists tend nowadays to think that the validity of a particular axiom is a function of the problem being considered. In certain cases, the rational model of action can lead to a satisfactory theory while, in other cases it will be insufficient or plainly out of place. In certain schemes, a holistic schema will lead to a satisfactory analysis while in other cases would lack relevance.

The types contained in table 1 must thus, if we examine sociology and economics such as they are today,

be thought of as schematic. It is no longer possible distinguish the two disciplines by making them correspond to one or another of these types.

As with regard to this study's topic, it is situated at the border between type 1 and type 2. Until now, such actions as giving money for charity, forgiving someone else's debts - of any nature these debts would be -, keeping certain rules in alimentation, or even spending time in church would have been treated as irrational, since no material gain is acquired. But, *if we consider the individual receives salvation in exchange for all these expenses, his behaviour becomes rational and self-interested, characteristics pertaining to homo oeconomicus* (type 1).

III. The Sociological Viewpoint

In his *Protestant Ethic and the Spirit of Capitalism,* Max Weber approaches the relations between economy (*Wirtschaft*) and society (*Gesellshaft*) trying to explain the forces behind the development of the capitalistic system in Western Europe. In explaining this evolution he emphasized profit-making business enterprise, but at the same time he was careful to point out that it was not the orientation to profit alone which was the crucial criterion, but such orientation in the context of careful, systematic rational planning and discipline, which connected profit-making with organization of the economy and with high technology. Even though his work was fragmentary and incomplete in this respect - partly because of his premature death, partly, perhaps, because of the grandeur of the scale on which he worked -, with his knowledge and careful structural analysis of comparative social institutions Weber was able to place the problem of the role of values in the determination of human social action in a new theoretical light. Thus, the important thing about Weber's work was not how he judged the relative importance of ideas or of economic factors, but rather the way in which he analyzed the systems of social action within which ideas and values as well as economic forces

operate to influence action.

The upshot has been, not only to raise important empirical problems, but to restate the forms of reference in which they can be approached. Empirically the attitudes toward profit-making business which have been associated with the ethic of ascetic Protestantism can now be seen to constitute only one major case within a wider field which includes above all, as Robert Merton has shown latter, attitudes toward the development of science, and more generally the type of culture and social organization.

Weber, as one of the main founders of the modern phase of social science, has thus helped to shift the basic problem from the question of *whether* and *how much* religions influence behaviour and society, to that of *how* they influence them and in turn are influenced by the other variables in the situation.

The question which Weber attempts to answer is simple and fundamental. It is that of the psychological conditions which made possible the development of capitalistic civilization.

Capitalism, in the sense of great individual undertakings, involving the control of large financial resources, and yielding riches to their masters as a result of speculation, money-lending, commercial enterprise, buccaneering and war, is as old as history.

Capitalism, as an economic system, resting on the organisation of legally free wage earners, for the purpose of pecuniary profit, by the owner of capital or his agents, and setting its stamp on every aspect of society, is a modern phenomenon. And what Max Weber approaches is capitalism in its early ages and not the capitalism as we can see it today.

All revolutions are declared to be natural and inevitable, once they are successful, and capitalism, as the type of economic system prevailing in Western Europe and America, is clothed today with the unquestioned respectability of the triumphant fact. But in its youth it was a pretender, and it was only after centuries of struggle that its title was established.

For it involved a code of economic conduct and a system of human relations which were sharply at variance with venerable conventions, with the accepted scheme of social ethics, and with the law, both of the church and of most European states. So questionable an innovation demanded of the pioneers who first experimented with it originality, self-confidence, and tenacity of purpose as it would be required today of those who would break from the net of rules within which we live. What influence nerved them to defy tradition? From what source did they derive the principles to replace it?

The conventional answer to these questions is to deny their premises. The rise of new forms of economic

enterprise was the result, it is argued, of the changes in the character of economic environment - i.e., the influx of the precious metals from America, the capital accumulated in the extra-European commerce, the growth of population, the technological improvements.

Weber's reply is that this revolution was the result of movements which had their source in the religious revolution of the sixteenth century.

His thesis supports the idea that pioneers of the modern economic order were *parvenus*, who elbowed their way to success against the established aristocracy of land and commerce. The tonic that braced them for the conflict was a new conception of religion, which taught them to regard the pursuit of wealth as, not merely an advantage, but a duty. What is significant, in short, is not the strength of the motive of economic self-interest, which is common for all ages, but the change of moral standards which converted a natural frailty into an ornament of the spirit, and canonized as the economic virtues habits which in earlier ages had been denounced as vices.

The force which produced it was the creed associated with the name of Calvin. Capitalism, in Weber's vision, was the social counterpart of Calvinist theology.

The central idea to which Weber appeals in

confirmation of his theory is expressed in the concept of *calling*. For Luther, as for most mediaeval theologians, this concept had normally meant the state of life in which the individual had been set by God, and against which it was impious to rebel. To the Calvinist, Weber argues, the calling is not a condition in which the individual is born, but a strenuous and exacting enterprise *to be chosen by himself*, and to be pursued with a sense of religious responsability.

Thus baptized in the Calvinist theology, the life of business, once regarded as perilous to the soul, acquires a new sanctity. Labour is not merely an economic means but rather a spiritual means to get the soul saved. So far from poverty being meritorious, it is a duty to choose the more profitable occupation. Thus the pursuit of riches, which once had been feared as the enemy of religion, was now welcome as its ally.

On short, Calvinism had discovered a compromise in which a juster balance was struck between prosperity and salvation.

In his monograph *Science, Technology and Society in Seventeenth-Century England,* Robert Merton raises a set of questions that are still actual, few of them with importance for the debate of the present thesis topic: What are the modes of interplay between society, culture, and science? Do these vary in kind and extent in

differing historical contexts? What makes for those sizeable shifts in recruitment to the intellectual disciplines - the various sciences and humanities - that lead to great variations in their development? Among those engaged in the work of science, what makes for shifts in the foci of inquiry: from one science to another and, within each of the sciences, from one set of problems to another? Under which conditions are changes in the foci of attention the planned results of deliberate policy, and under which the largely unanticipated consequences of value commitments among scientists and those controlling the support of science? How did these matters stand while science was being institutionalized and how do they stand since its thoroughgoing institutionalization? And once science has evolved forms of internal organization, how do patterns and rates of social interaction among scientists affect the development of scientific ideas? How does a cultural emphasis upon social utility as prime criterion for scientific work variously affect the rate and direction of advance in science?

These are plain questions of enough generality to be addressed to every society and historical epoch where an appreciable number of people are at work in science. What the author of monograph undertook was to pose these general questions for the historically specific case of seventeenth-century England, and the theoretical mode in

which he attacked these questions still holds a certain interest.

A principal sociological idea governing this empirical inquiry holds that the socially patterned interests, motivations, and behaviour established in one institutional sphere - say, that of religion or economy - are interdependent with the socially patterned interests, motivations, and behaviour obtaining in other institutional spheres - say, that of science.

There are various kinds of such interdependence, but we need to touch upon only one of these. The same individuals have multiple social statuses and roles: scientific and religious and economic and political. This fundamental linkage in social structure in itself makes for some interplay between otherwise distinct institutional spheres even when they are segregated into seemingly autonomous departments of life. Beyond that, the social, intellectual, and value consequences of what is done in one institutional domain ramify into other institutions. Separate institutional spheres are only partially autonomous, not completely so, and it is only after a typically prolonged development that social institutions, including the institutions of science, acquire a significant degree of autonomy.

In its essence, this conception of the inter-dependence of social institutions had not been a new

idea, even when this study was first carried out. At the same time, it is an idea that has still not been thoroughly worked out in its many implications. Even now, there are scholars who would argue that science goes on its own way, unaffected by changes in the environing social structure. Moreover, this is an idea that has often been distorted into a doctrine of factors in social development: of social, economic, religious, political, military, technological, and scientific factors in different historical societies. It is an idea that has also been stretched into doctrines of universally dominant factors resulting in claims to "the economic determination of historical change" or its "technological determination" or "political determination."

Merton's inquiry into the interdependence of science and other institutional spheres neither adopt a factor theory nor generalize this interchange for other cultures and other times. Rather it states that the nature and extent of these interchanges differ in various societies, depending on the state of their science and of their institutional systems of economy, politics, religion, military, and so on.

Since its publication, this monograph has not suffered from inattention. Yet, in spite of all the reasons for critically considering its other themes, the scholars who turned their attention to it generally

preferred to center on the hypotheses of linkages between Puritanism and science. Had educated and articulate Puritans of the seventeenth century been social scientists, they would have found this focus of interest passing strange. For they took it almost self evident that science made not for the dethronement of God but rather provided a means of celebrating His wisdom and tidiness of the universe, a means to get closer to Him. He had created.

The section of the dissertation dealing with Puritanism focused on what then seemed to many an improbable, not to say absurd, relation between religion and science. The author ascertain that, without Puritanism, there could have been no concentrated development of modern science in seventeenth-century England. In the case in hand, it is certainly not the case that Puritanism was indispensable in the sense that if it had not found historical expression at that time, modern science would not then have emerged. The historically concrete movement of Puritanism is not being put forward as a prerequisite to the substantial thrust of English science in that time; other functionally equivalent ideological movements could have served to provide the emerging science with widely acknowledged claims to legitimacy. Resuming, the interpretation in this study assumes the functional requirement of providing socially and culturally patterned support for a

not yet institutionalized science; it does not suppose that only Puritanism could have served that function. Puritanism provided major (not exclusive) support in that historical time and place.

IV. The Utility-Maximization Models and the Religious Behaviour

Throughout the 19th century and afterward, economists only rarely attempted to apply their kind of reasoning to problems other than those involving exchange across well-defined markets.

In recent years, however, some of them have extended the models of rational maximizing behaviour to a diverse range of problems including the religious behaviour.

As Gary Anderson (1988) mentions, even though he had been ignored by modern practitioners, the early proponent of this movement was Adam Smith who applied economic principles to problems of non-market exchange and the evolution and function of institutions. Specifically, he deserves credit for a bold extension of economic analysis into an area of human behaviour traditionally thought to be beyond the boundaries of economic science: religion.

Smith tried to explain why rational self-interested individuals participate in religion, on both the demand and supply side, and what are the economically relevant effects of religious practice. He explored the effects of competition as opposed to monopoly in the market for religion, and explained the role of changes in religious institutions on the emergence of the commercial society from feudalism.

From this whole body of economic analysis, the significant aspects for the purpose of this paper are those regarding morality and religious behaviour.

In the Wealth of Nations, Adam Smith was concerned with two basic problems:

1. the economic incentives involved in the individual's decision to practice religion, and

2. the economic effects of different systems of religious belief as reflected in individual behaviour.

Since religious beliefs function as constraints on the perception and judgements of individuals, they can be expected to produce economically relevant effects. The main difficulty raised is that these beliefs are not directly observable and measurable, and implicitly, the nature and parameters of such constraints remain subject to untestable speculations. What Smith did was to attempt to define the logical economic consequences of certain kinds of religious belief. However, he did not have the necessary tools to analyze religion from the perspective of relevant constraints; the costs and benefits of religious practice, like the costs and benefits of other forms of observable behaviour, can at least be identified and possibly measured.

First, Smith noted that one of the most significant functions of religious belief is to provide strong

incentives to follow moral strictures that, in turn, help to support civil society; strictures such as honesty, restraint from violence, and benevolence. The concept of a supreme being serves as an enforcement mechanism for moral conduct among believers that, in effect, supplements the enforcement efforts of secular authorities and complements the other incentives that cause individuals to control their own behaviour. He writes:

> The idea that, however we may escape the observation of man, or be placed above the reach of human punishment, yet we are always acting under the eye, and exposed to the punishment of God, the great avenger of injustice, is a motive capable of restraining the most headstrong passions, with those at least who, by constant reflection, have rendered it familiar to them. (1982, p. 170)

The belief in God constitutes a kind of internal moral enforcement mechanism. The cost of external monitoring of every individual's behaviour all the time is extremely high; religion provides the basis for a system of internalized monitoring that represents an efficiency-enhancing adaptation to this problem.

However, while religious belief functions as a significant element in self-monitoring, it is also suggested that men erect barriers against their own

passions as a result of a capacity of moral judgement.

Adam Smith was also interested in explaining the economic incentives for individuals to choose to participate in religious activities. He offered an explanation for such behaviour based on his theory of the capital value of reputation. Even though he is well known for discussing the human capital value of education, there also are a number of passages that indicate the understanding of the capital value of reputation.

Religious groups tend to produce and distribute information about individual members. One of these is the moral information -with respect to an individual's moral history - which is valuable to the extent that it provides potential transactors with an insight about the risk associated with a given exchange. If the moral duties are perceived in the market as relevant to assessing the riskiness of potential transactions, an individual's moral reputation has a capital value.

Smith also suggested that the quality of religion can be objectively evaluated as in the case of any other good or service. He did not view all religion as equally irrational; different types of religious doctrine have different effects on the behaviour of individual believers and hence on the operation of the economic system. Thus, pure and rational religion, free from every

mixture of fanaticism, is a necessary prerequisite for a peaceful functioning of the division of labour leading to an efficient operation of the economic system.

Overall, while Smith did not offer a "general theory" of the economic function of religion, he did produce major analytical elements through simply applying the same principles used to understand the ordinary commercial transactions to understanding religious institutions.

The pioneer formal step was made by Corry Azzy and Ronald Ehrenberg who first approached the determinants of individuals' participation in religious activities from an economic standpoint.

The starting assumption is that individuals try to maximize the stream of benefits planned to be received both in life and in the afterlife period. These benefits can be created by investing only one resource: the time spent by household members in church activities.

The household is assumed to consist of two members (husband and wife) whose preference function is:

$$U = U(C_1, C_2, .. C_t ... C_n, q),$$

where (C_t) is the household's consumption in period t during its lifetime and (q) is the expected value of the household's afterlife consumption.

Household's consumption in period t is given by a production function which transforms the household's

purchases of a composite of market goods (x_t) and the time allocation by the husband (h_{1t}) and the wife (h_{2t}) to consumption into units of the "final consumption commodity" (C_t),

$$C_t = C(x_t, h_{1t}, h_{2t}).$$

Expected afterlife consumption is a function of the time spent in church-related activities by the husband (r_{1t}) and wife (r_{2t}) during their lifetimes:

$$q = q(r_{11}, r_{12}, \ldots r_{1n}, r_{21}, r_{22}, \ldots r_{2n}).$$

In "An Economic Analysis of Religious Choice", Barbara Redman applies production economics models to spiritual goods focusing on individuals who seek spiritual well-being. She considers that during his lifetime the individual engages primary in production of spiritual goods expecting the consumption of rewards in Heaven.

By considering the theological difference in goods produced by liberal and conservative religions, and the differing technologies involved in their production, production economics is used to build a framework for analyzing an individual's choice of denomination.

In her model, Barbara Redman considers two inputs in religious production: time and money, and two joint outputs: personal salvation and social welfare.

The inputs produce both personal salvation and

social welfare, but use different technologies. To an extent, they can substitute for each other but this substitution is not equally feasible for both products. While personal salvation is relatively time-intensive, social welfare is relatively money intensive. The difference between these two technologies is reflected in the isoquant curves of fig.1.

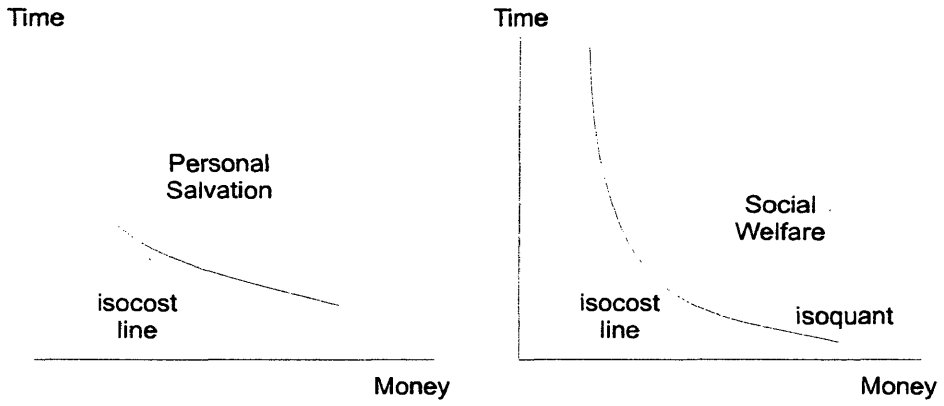

Fig.1 Isoquant and isocost curves indicating different technologies of production of personal salvation and social welfare.

One of the possible issues involved regards the substitutability of personal salvation and social welfare, namely: what combination of the two will a person choose to produce?

The product transformation curve in fig.2 indicates the combinations of goods which can be produced, given a total amount of resources.

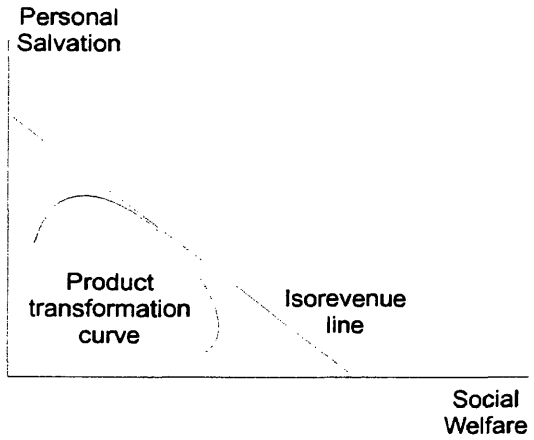

Fig.2 An individual's choice of combination of spiritual goods.

In general, to produce more of one good one must produce less of another because of the limited resources. However, the end sections indicate complementarity of the goods over some ranges of production (production of one good facilitates production of another in cases where little of one is produced).

The slope of isorevenue line indicates the perceived relative benefits to the individual of each good. These perceived relative benefits arise through social and cultural influences during the previous experience.

From the tangency of the product transformation curve and isorevenue line the individual will determine his choice combination.

Another issue raised considers the effects of a change in income on individual's production choice. As seen in fig.3, increases in income (rightward shifts of

isorevenue line) shift the transformation curve rightward leading to an increase in production of social welfare greater than the increase in personal salvation production (it is assumed that the slope of the individual's perceived isorevenue line remains unchanged).

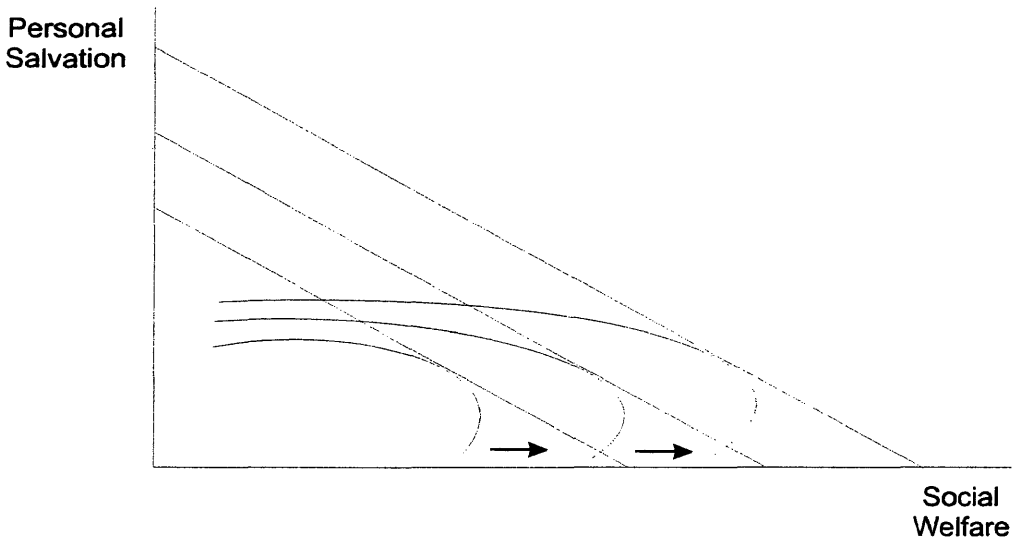

Fig.3 Changes in individual's choice due to changes in his/her income.

Thus, with an increase in income, the individual will choose a more liberal denomination which has a greater emphasis on social welfare. With a decrease in income, the individual shifts to more conservative denominations which emphasize personal salvation.

In "A Formal Model of Church and Sect", Laurence Iannaccone (1988) considers a different aspect of religious activity: the normative conduct required within

these organizations. Because the purpose of his study is somewhat different from mine, what I have done is to put his arguments in a different perspective to making them useful for my objective.

The model is of an individual who allocates resources to maximize his overall satisfaction or utility. For simplicity it is assumed the utility derives from two broadly defined commodities: religious and secular, denoted R and Z.

Religious commodities (R) are multidimensional including assurance of personal salvation, fellowship with others, security, spiritual enlightenment, and so forth and will depend on individual's input of time, goods, prior religious experience (religious capital), and conduct.

Secular commodities (Z) are also multidimensional and depend on time, goods, human capital, and conduct.

Summarizing, the production functions are:

$$R = R(T_r, X_r, S_r, C),$$

$$Z = Z(T_z, X_z, S_z, C),$$

where T denotes time, X-goods, S-human capital, and C-conduct.

The individual's problem is to choose the combination of inputs that maximizes the overall utility:

$$U = U(R, Z)$$

subject to the production functions and a constraint on total available time and money.

The inputs T_r and X_r measure the quantity of time and goods devoted to religious practice. T_r includes time spent participating in and traveling to and from church services and devotional time spent praying, meditating, and reading scriptures. X_r includes money contributions, sacrificial offerings, travel expenditures, and Sunday attire.

The input S_r includes scriptural knowledge, familiarity with church ritual and doctrines, transcendent experiences, and religious social networks the individual belongs to. The secular inputs T_z, X_z, and S_z are defined in an analogous fashion. The difference in subscripts indicates that the variables differ from the religious ones.

Time and goods must be divided between religious and secular activities; also, the secular experience is distinct from the religious even though they are not disjoint. C carries no subscript because the author assumes the same conduct affects both religious and secular commodities. Also, in contrast to T and X which measure quantities of resources devoted to religious activities, C represents the qualitative aspect of religious commitment which manifests in one's overall life-style.

In Iannaccone's vision, conduct has three critical attributes:

1. It is not reducible to time and goods.

2. It affects both religious and secular productivity in the sense that the conduct which raises R tends to reduce Z, and vice versa.

3. It remains the same in both religious and secular contexts. It does not mean that people cannot change their manner of behaviour to fit the surroundings but this change is costly because it generates guilt and it conflicts with habit. This is why the actual variation will be minor.

The following assumptions were made to simultaneously simplify the analysis and preserve the critical characteristics:

a. R and Z may be measured as one-dimensional characteristics.

b. R and Z depend only on conduct and experience.

c. The individual is already associated with a particular religious group and determines his/her behaviour subject to continued association with that group.

d. Conduct varies continuously over a multidimensional space of behavioural attributes (which includes say dietary behaviour, dress, sexual conduct, and so forth).

e. For each religious group there is a particular manner of conduct C_r, called "behavioural norm", which maximizes R. There will also exist a manner of conduct

C_z, called "secular norm", which maximizes Z, where C_z depends on both social and technological structure of society.

f. R is bounded below. Participation in the religious group is assumed to be voluntary; individual's deviation from the "normal" conduct can be punished only through excommunication but not through active persecution (such as confiscation of property, inprisonment, or torture).

Given the assumptions above, the model had been analyzed by using both mathematical calculus for optimization and a more simple and equivalent diagrammatic approach.

Since conduct affects both religious and secular productivity, R and Z are functions of C which are visualized in fig.4 with peaks at their respective maxima, C_r and C_z.

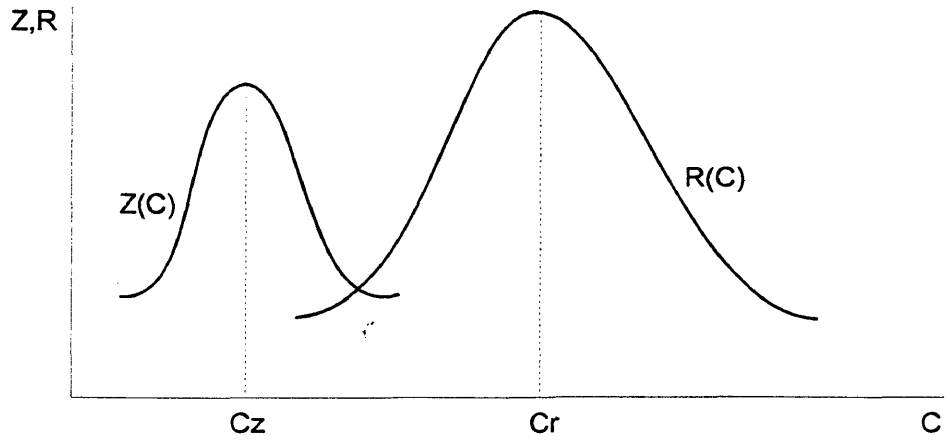

Fig.4 Secular and religious profiles superimposed

From assumption f, the functions tend to flatten out as C deviates from C_z and C_r respectively.

Unless the religious and secular norms are identical, the individual faces an implicit trade-off between R and Z. To increase R one must adopt a position closer to C_r - religious norm - which means to move away from C_z - secular norm - and reduce Z. The trade-off may be made explicit by plotting R(C) and Z(C) on separate axes as depicted in fig.5.

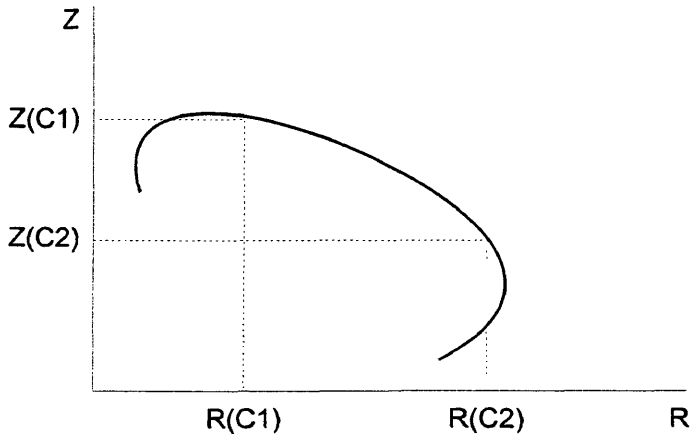

Fig.5 The Z-R production possibility frontier.

When all the R and Z pairs corresponding to various positions of C are plotted, they yield the production possibility frontier labeled Z-R. This frontier shows the combinations of religious and secular commodities which may be obtained as conduct is varied.

Although the individual may choose any combination of R and Z that lies along the frontier, not all points will be equally preferred. To maximize his/her overall

satisfaction, the individual must determine which of the points is most preferred and then choose the behaviour - C* - that corresponds to it.

An individual's preferences are formally represented by an utility function U(R,Z) which is depicted by a set of indifference curves in fig.6.

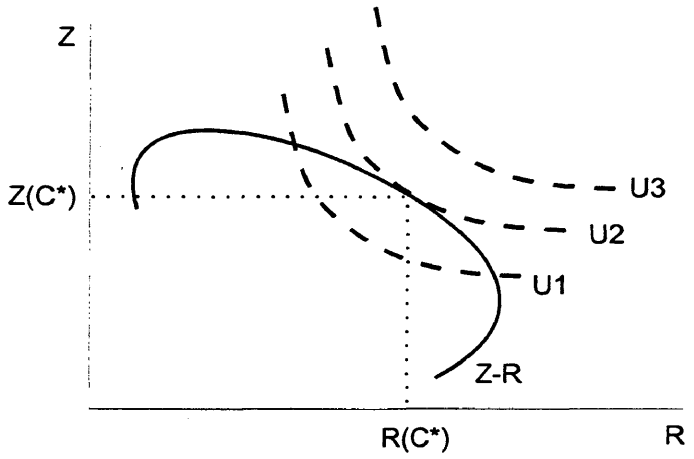

Fig.6 The selection of "optimum conduct", C*.

The production possibility frontier depicts the commodity combinations available to the individual and the indifference curves depict the individual's preferences by indexing the utility associated with any such combination.

Within this framework, maximizing one's overall satisfaction is equivalent to finding the point on the production frontier that lies along the highest indifference curve. This optimum generally will lie at a tangency of the frontier and a indifference curve.

David Levy (1988) approaches the human behaviour from a different perspective: how people do choose between alternatives given the limitations of their perceptions, and the constraints included in moral teaching. The overall purpose of his article is to construct a model of what would be an equilibrium moral code over consumption space.

The first issue addressed is the individual's systematic perception failure which is considered a version of incomplete information. To start the construction of a model of perception failure it is needed a distinction between the subjective and objective ends.

The subjective goods are those for which individuals may have perfect knowledge of their utility function even though they have imperfect information about how these ends can be attained in the objective world. For the objective goods the individual knows both his subjective utility function and how to realize these goals in the objective world.

The original point Levy makes is that compared with the "classic" models, where material goods are the only arguments of the utility function and perfect knowledge is assumed, his model represents someone who knows the ends but not how to attain them. To formulate the model he assumes the existence of a vector of objective goods (Z_i), objective goods which are related to a vector of

subjective goods (X_i).

In this case, the consumer's problem is to maximize the utility U(Z) subject to various constraints, i.e., time is fixed by the length of life, income to purchase market goods is scarce (as compared to his wishes!), and knowledge of the various production functions is costly.

A household production function for one of the subjective goods is presented as:

$$Z = Z(X_1, X_2 \ldots X_n, \text{time}, M),$$

where M denotes the stock of information which the individual possesses about the production of Z. And there is no serious difficulty in specifying a household production function when the consumer has perfect information (fig.7).

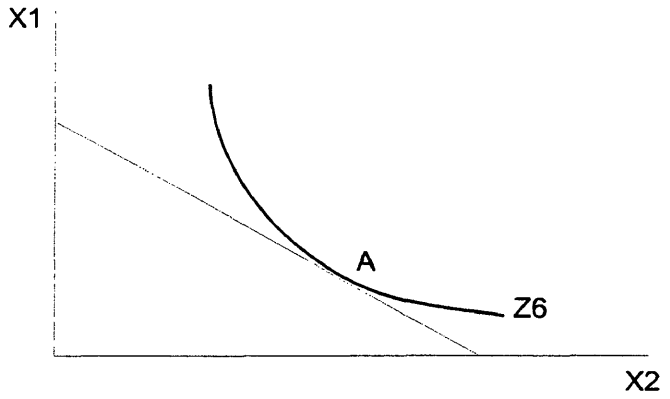

Fig.7 Household production maximization of Z (with perfect information).

The problem comes when the consumer does not know what his production function is, or at least not in the

detail as usually is supposed. Let suppose the initial equilibrium is situated at some point J and the individual must change his equilibrium because of an external influence, i.e. an increase in income (fig.8).

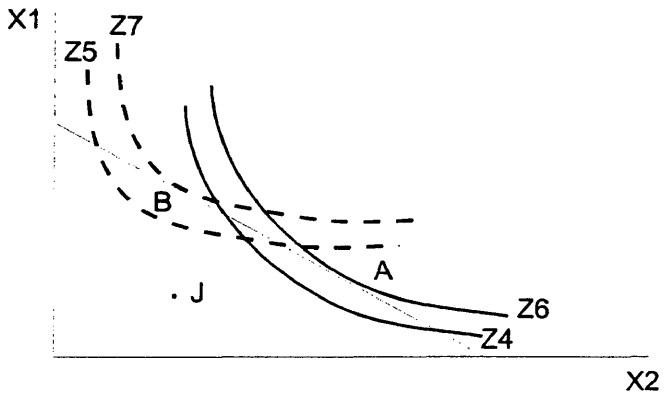

Fig.8 Household production maximization of Z (with imperfect information).

The individual is looking for a new equilibrium and will start moving toward it depending on his perceptions, which are indicated by the dotted curves. If he thought his perceptions correct and if he can perceive the budget constraint, the individual thinks producing at B would generate Z_7 which is the highest indifference curve attainable. Moving to B he discovers that with the combination of X_1 and X_2 at this point in reality he produces only Z_4 which is less than Z_6 which is possible and expected in an utility maximization model. Naturally, in the next step the individual will move toward A to improve his position.

This pattern of action takes places under the

following assumptions:

1. The individual perceives without error all the true household production at an infinitesimal distance of his current location.

2. He knows that more is preferred to less and what constraints he confronts.

3. He will not move from a point in space which he perceives correctly to a point which he neither perceives nor has theoretical knowledge about; this supposes an individual will not leap into the dark, but will only move between points in space where his preferences are known. In fig.8 he will not move from B to A without knowing how to compare A and B.

4. The individual can move over the entire space in an instant.

The conjunction of these assumptions with the specification that isoquants are convex leads to the conclusion that whatever mistake the individual makes there is always enough information to decide whether adjustments are to be made and what direction to make them. In terms of maximization models this states the improvement by hill climbing; the choosing agent does not get to an equilibrium with a jump but he gropes toward one.

If the production functions are convex, then the

local information is sufficient to direct individual toward a global maximum. In the next step Levy drops the convexity assumption and this leads to nonconvex isoquants as seen in fig.9.

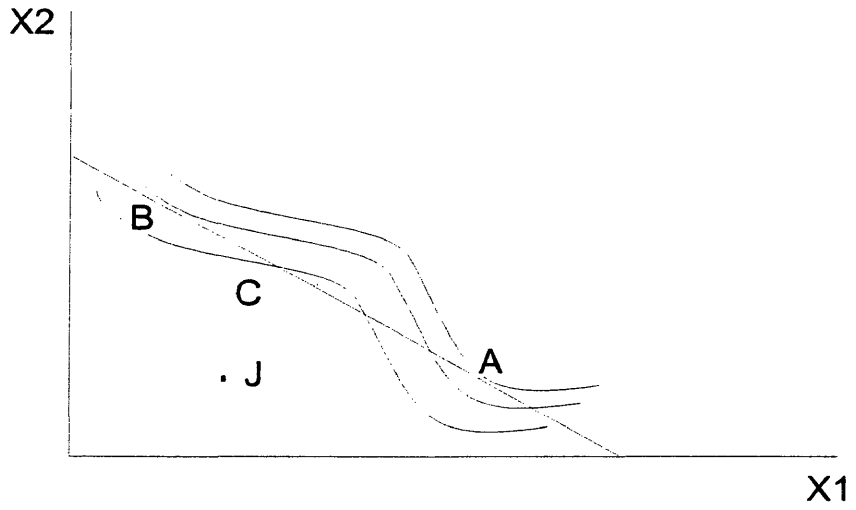

Fig.9 Household production of Z (with imperfect information and nonconvexity).

The individual starts at J and moves to C, as justified by the stipulation that more is preferred to less.

Once at C, if assumption 1 holds, the individual perceives that the efficient level of production occurs in the direction of B. This, of course is not true because efficient production occurs at A.

However, unless the individual is guided by something other than his limited perceptions, he will move toward the local maximum B and not make his way to global maximum A.

With only local information, non-convex production curves will not allow individuals to approach a global maximum. An individual who will not leap into the dark, is constrained to move continuously along the budget constraint.

The question Levy tries to answer is: with these limited perceptions, how does the individual obtain knowledge about the existence of A?. And he suggests that moral information can help optimizing the problem, as drawn in fig.10.

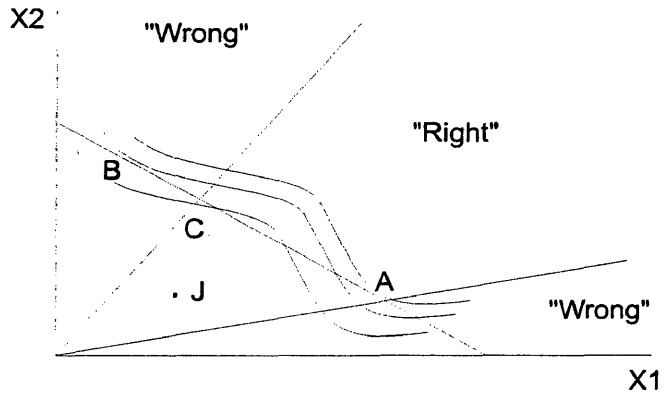

Fig.10 Household production of Z (with imperfect information, nonconvexity, and moral constraints).

This figure had been constructed by adding to fig.9 a "Pythagorean cone" (P-cone) which specifies the moderate way of living, as preached by most religions. Inside the cone is "moderate" and outside is "excess".

The moral teaching provides only a soft constraint: there is no physical barrier to consumption outside the

cone. The only barrier provided by this constraint is that of moral consciousness which tells to the choosing agent that good life is to be found in obedience to this constraint.

In terms of fig.10, the individual who honors the P-cone would start his search at C, at the edge of what is morally possible. For a person with limited perceptions allowed in the model, C appears to be the best which can be attained subject to the moral constraint.

If the moral teaching is more than just a constraint upon choice and it informs the agent that utility maximization is found within constraint, the individual who at the same time accepts this morality and wishes to maximize utility will search for the global maximum which is hidden from his imperfect perceptions. Instead of proceeding to the local minimum at B, he will turn the other way and search in the direction of A.

This is one utility-enhancing aspect of such a theory of morality: without moral information the individual has nothing with which to overcome local information.

Overall, in approaching this issue, what the author does is to exchange the assumption of perfect perception in the domain of household production for the assumption of a moral code that gives perfect guidance.

V. A Comparative Analysis of Judaic, Catholic, Orthodox, and Protestant Religions

For the purpose of this study, four different denominations were chosen: Judaic, Catholic, Orthodox, and Protestant. Even though their doctrines are based on the same writtings - The Bible -, there are great differences between the moral norms preached as being "ideal" for conducting human behaviour.

From the beginning it should be mentioned that the purpose of this comparison is not to evaluate or to criticize any of the religious doctrines analysed, and that we ignore the questions of government and organization which do not interest us here. What we emphasize are the differences which appear in actual conduct despite the great similarities in text.

Judaism as a religion is a belief in one, universal God as creator, conceived of as personal. It assumed its modern form after the return of the Jews from the Babylonian captivity (586-538 B.C.). After the destruction of the Temple (70 A.D.), religious life became centered on the synagogue and the home, while the priesthood was replaced by the rabbi.

It interprets history as God's convenanted choice of the Jews to be the vehicle of the revelation which was

made on Mount Sinai when the Ten Commandments were delivered to Moses, in the context of the teaching of the Pentateuch. This law has, over the centuries, been codified and made applicable to all situations in life.

Judaism looks for a messianic age when God's rule will be made actual in the world. It has been sustained by the hopes that Jews would return to the Promised Land of Canaan, and that a Messiah would arise to rule Israel and the world.

Under the moral code derived from the Old Testament people try to attain salvation by following the Ten Commandments and the rules that had driven the behaviour of their ancients.

Studying the content of the Old Testament we can observe that God express His option, both explicitly and implicitly, of choosing the people of Israel for ruling the world. Explicitly, through the convenant with Abraham, Isaac, Jacob, and Moses; implicitly, throughout all the histories which present the Israelites as obtaining competitive advantage over other people. These advantages are always gained by using the power of their minds rather than by force.

The "classical" example which best illustrates this case is the way Jacob took the birthright from his brother Esau; he came deceitfully and took away the blessing from their father Isaac. Later on, Jacob got

riches using a trick against his father-in-law Laban. And there is no mention that this kind of behaviour would be unfair or immoral.

A Judaic believer who tries to save his soul will always be looking to make himself better than other people, in order to justify his status as "chosen person".

Catholicism is the faith of the Catholic Church. The Roman Catholic Church is that part of the Christian Church which accepts the authority of the pope, in distinction to the Orthodox Eastern Church, which separated from it in 1054, and to the Protestant Churches which broke away in the 16-th century.

The Roman Catholic Church rose to be a great political force in the Roman Empire (4-th century) and dominated Western Europe throughout the Middle Ages.

Attacks on the church culminated in the Reformation. The Counter-Reformation produced educational and administrative reforms within the Church, and missionary activities were extended under the Jesuits in the Far East and America.

From the Council of Trent (1545-1570) to the Vatican Council (1869-1870) the Church was on the defensive against the incursions of rationalism, enlightenment, liberalism, and revolution.

In the 20-th century it has begun to reconsider its

ideological traditions and to participate in the ecumenical movement.

Distinctive tenets of Roman Catholicism are the authority of ecclesiastical tradition, transubstantiation, the seven sacraments, papal infallibility, purgatory, the Immaculate Conception and the Assumption of the Virgin Mary.

Catholic theology is based on the natural and divine law as established by Thomas Aquinas.

Orthodoxism is the faith generated by the Eastern Orthodox Church. The Orthodox Church is that part of the Christian Church centered on the patriarchate of Constantinople, which became separate from western Christendom in 1054, when it refused to accept the supremacy of the pope and was excommunicated by Pope Leo IX. This Church comprises 16 autocephalous patriarchates: Constantinople, Alexandria, Antioch, Jerusalem, Russian, Greek, Romanian, Serbian, Bulgarian, etc., dominating over Eastern Europe.

Doctrinally, the Orthodox differ little from Rome, but they accept only the first seven ecumenical councils (until 787), and deny purgatory and the Immaculate Conception.

Emphasis is placed on ritual, monasticism, and mysticism, and the priesthood is not always celibate.

Catholicism and Orthodoxism, based mainly upon the New Testament, preach that God establishes a fixed calling for each human being for the worldly life. This calling is something which man has to accept as a divine ordinance.

The individual should remain once and for all in the station and calling in which God placed him, and should restrain his worldly activity within the limits imposed by his established station in life. This is the reason why the Orthodox or Catholic looks upon the worldly activity either with indifference, or at least essentially traditionalistically. Since everyone is simply waiting for the coming of the Lord, there is nothing to do but remain in station.

Thus, Catholicism and Orthodoxism are characterized by the existence of an intense belief in divine providence, which identifies absolute obedience to God's will with the absolute acceptance of things as they are. The emphasis on the providential element, even in particular events of life, leads more and more to a traditionalistic way of living - and thinking - based on the idea of Providence.

As a result of manifesting this type of behaviour during the ages, the word "orthodox", according to Webster's Dictionary, has the meaning of "conforming or holding the official, accepted or standard opinions, not

heretical or independent // standardized, conventional"(1991, p. 709).

Protestantism is the faith of the Protestant Churches. This church separated from the Roman Catholic Church at the Reformation, and later separated into Anglican, Baptist, Congregationalist, Evangelical, Lutheran, Methodist, Reformed, and Presbyterian Churches. In this study, we are more interested in the Reformed Church which follow the doctrines of Zwingli and Calvin rather than those of Luther.

The Protestant Ethic is built upon mores involving compliance with the law and placing importance on work, thrift, self-discipline, competition, and making a profit.

With the new interpretation of the Bible introduced by the Reformation, the Father in heaven of the New Testament, so human and understanding, who rejoices over the repentance of a sinner, was replaced by a transcendental being, beyond the reach of human understanding, who with His incomprehensible decrees decides the fate of every individual.

For Protestantism, the doctrine of predestination is considered its most characteristic dogma - as for the other Christians -, but in this version God decrees, for the manifestation of His glory, that some men are

predestined into everlasting life, and others to everlasting death. Since God's decrees cannot change, His grace is impossible to lose for those to whom He has granted it, as it is unattainable for those to whom He has denied it.

Along with this interpretation of predestination, appear two types of pastoral advice. On the one hand, it is held to be an absolute duty to consider oneself chosen, and to combat all doubts as temptations of the devil since lack of self confidence is the result of insufficient faith.

And, on the other hand, in order to attain that self-confidence, intense worldly activity is recommended as the most suitable means. It and it alone disperses religious doubts and gives the certainty of grace.

Worldly activity - both in its physical and intellectual manifestations - should be considered to be the most suitable means of counteracting feelings of religious anxiety. This finds its explanation in the fundamental peculiarities of religious feeling in the Reformed Church.

Concluding, it can be argued that "calling" in the Reformed doctrine is not a condition in which an individual is born, but rather an obligation to choose an enterprise and to pursue it using all his capabilities.

VI. Survey on Religious Behaviour

As we have seen in the previous chapter, different religions (i.e., Catholic, Orthodox, Protestant, and Judaism) preach different ways of ascending towards -salvation in afterlife. These teachings refer rather to a general way of living, without addressing in an explicit manner professional behaviour. We could observe however that their general recommendations imply different viewpoints about the degree to which an individual should drive his own destiny. Some of them (Protestant and Judaism) recommend a willful attitude, while others (Orthodox and Catholic) see an obedient attitude as more desirable. In other words, using the concepts of Microeconomics, they orientate the Pythagorean cone on different areas of an indifference curve which describes options between willful (proactive) behaviour and obedient (reactive) behaviour.

On the other hand, individuals who tend to work in top managerial positions must have an internal drive to take risks and to manage other people, which obviously requires a proactive, voluntary attitude (see figure 11).

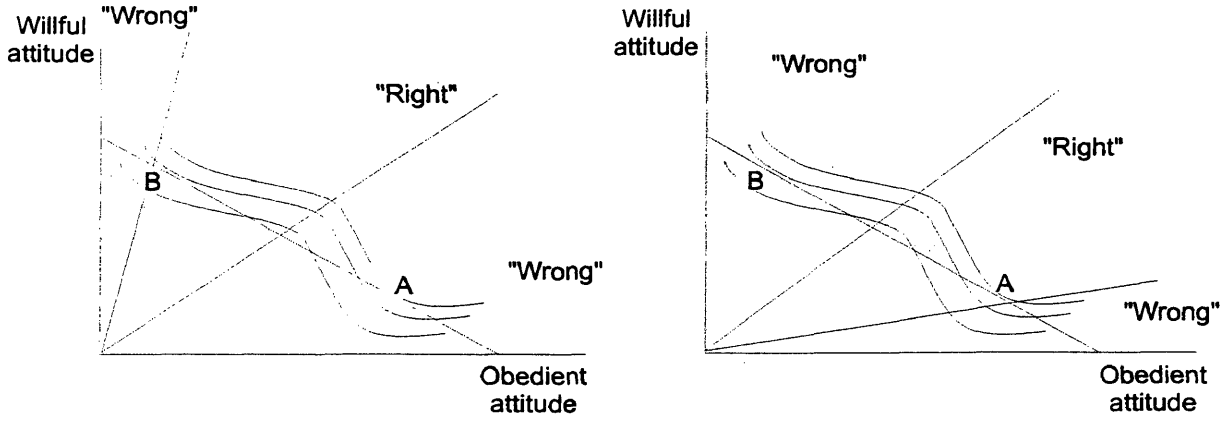

Fig.11 The models with non-convex indifference curves and different orientations of the P-cones.

From these observations we could conclude that in top managerial positions, people educated under the Protestant or Judaic prescriptions should prevail. However, in the actual business world we could find persons who declare themselves as being Catholic or Orthodox. A possible explanation for adopting professional behaviour would be that persons from the first group are "strong believers", while those from the second category are "deviants" from the ethical norms of their religion.

VI.1. Research Design

Research design is an overall guide which sets out the basic tasks and objectives to be realized in order to

adequately address a given problem. The research design prescribes the method of research to be done. In theory, there are three basic categories of research: exploratory, descriptive, and causal.

Exploratory research provides insights into vague, unclear problems helping to formulate discernable propositions. This is a qualitative type of research; it gives a preliminary picture of the phenomenon before undertaking descriptive or causal research. Exploratory research is strongly recommended when information about a phenomenon to be investigated is limited; for these situations, the data collection strategy is very flexible. In cases when the problem investigated is unambiguous and precise, a second category comes into play: *descriptive research*. It is used in order to describe the nature of the phenomenon under study. When this method is chosen, a data collection strategy should be rigidly specified. *Causal research* is developed to identify the factors that cause a particular effect; its final result consists in supporting or rejecting an initial hypothesis about a cause-and-effect relationship between the independent variables and the dependent variable.

In undertaking this study, due to the complexity of the phenomenon, only the exploratory and descriptive were employed. The former played an important role for getting a preliminary understanding about relationships between

religion and economic behaviour; it consisted in studying major papers published on the topic, and in consulting with qualified persons. Its main results are presented in the first chapters of this thesis. As a result of exploratory research, among other ideas, several major propositions were drawn:

1. Protestant managers are "strong believers".
2. Jewish managers are "strong believers".
3. Orthodox managers are drifting away from the values of Orthodox ethics; they are not "strong believers".
4. Catholic managers are drifting away from the values of Catholic ethics; they are not "strong believers".
5. Muslim managers are drifting away from the precepts included in Koran.
6. Compared with men, women are more attached to their religious ethics.
7. As they age, people become more attached to religious values. Elder managers are "stronger believers" compared with younger ones.
8. The higher the income among Protestant or Jewish managers, the higher the probability of being "strong believers".

9. The higher the income among Orthodox or Catholic managers, the lower the probability of being "strong believers".

Descriptive research was necessary to acquire deeper insights into the influence of religious morale over individuals' professional behaviour. The way it was undertaken and the steps developed are described in details in the following paragraphs.

VI.2. Objectives

One of the rationales for initiating this study is to look for some possible explanations of professional success as measured by achieving the status of top-management level. The research was designed to explore the existence of a relationship between religious doctrine and an individual's tendency towards top managerial positions.

The purpose of the research is to find empirical evidence which will support or refute the following preliminary hypotheses:

1. Managers who declare themselves as being Protestants or Jewish are "strong believers".
2. The Orthodox and Catholic managers tend to deviate from the values of their doctrines.

The initial hypotheses were made operational using two empirical proxies for one of the key concepts in the study (i.e., individuals' devotion to the religious doctrine):

1. Frequency of attending religious service is being considered an appropriate indicator for approximating the level of an individual's participation in religious activities and, consequently, for measuring his devotion to the prescribed "appropriate way of living" as taught by clergymen.

2. A second indicator considered for measuring an individual's fidelity with religious doctrine is the time spent in church (synagogue, mosque, temple) each time he/she attends religious services.

Independent and Dependent Variables

For studying the influence of religious moral norms over an individual's preference for seeking and attaining managerial positions, it was necessary to consider a number of variables.

The dependent variable considered is: *orientation towards top managerial positions*, seen as a desired and attained professional objective.

The independent variables considered are: *religious identification, devotion to religious norms, gender, age,* and *income.*

VI.3. Methodology

In order to accomplish the purpose of the research, a survey was administered on a sample of 300 top-managers from firms located in eastern part of Romania.

In designing the research (i.e, selecting a data collection method, establishing the sample, and designing the questionnaire), additional causes for subjects' participation into religious service were considered: "Why they go (or don't go) to creed places?", "What motivates them to stay for a long (or short) time while attending religious services?". However, taking into account limited research resources, the complexity of this domain, and the fact that attitudinal data do not yield to exhaustive interpretations, the area of investigation had to be limited.

Limitation of resources was a key factor in determining the geographical extent of empirical investigation. Thus, survey based research could have been directed at a worldwide, continental, national, regional, county, or local community scale. It was considered that a regional sample, drawn from the top manager population of businesses located in the eastern

part of Romania (the Moldavian region, which includes eight counties) would be relevant for the proposed aim (see Appendix A). Even if research had been conducted at a national scale, it would not change the sample composition because the Orthodox population is dominant in other Romanian regions, too. A further sample enlargement by extending it towards Western European countries, where the number of Catholics, Protestants and Jews is larger, was not attainable because of the limitation of resources available.

Data Collection Method

Data collection was aimed to provide information about behavioural features which reflect deep human nature characteristics. This aspect became dominant in choosing an adequate survey method when considering (1) the preliminary assumptions, (2) a desired high response rate, and (3) the need for quality data, in full concordance with the proposed aim.

The first step of the research project was to establish the most appropriate method for collecting data. Several alternatives were considered, such as semi-structured face-to-face interview, mail survey, direct applied questionnaire, or a combination of these methods. Also, at this point it was necessary to consider time,

human and financial resources available for collecting data.

Time constraints ruled out the alternative of a *mail survey*. This method could take several months to receive enough responses for getting a representative sample. Moreover, for a longer period of time, responses would have been biased by different levels of intensity in participating at religious services. For instance, individuals would have given different responses if they were questioned near Christmas or Easter holidays, compared with the other time periods of a year, because the level of religious consciousness is different.

A second alternative, *semi-structured face-to-face interviews* could lead to a significant number of non-responses and distorted answers (in the sense of respondents giving self serving answers). For these reasons it proved not to be appropriate.

Finally, the *questionnaire based face-to-face survey* was considered as being most appropriate because it has several advantages compared with alternative methods:

1. it has a higher response rate than a mail survey,
2. it requires a relatively short period of time for returning questionnaires,
3. it offers the possibility of self application (by self-administration); thus the possible influences

exerted by people who are interviewing subjects are considerably lower.

Sample Design

In designing the sample, religious composition for population from Moldavia region had to be considered. Even though specific data about this region were not available, we believe that national data would be an accurate aproximation. According to the National Census from 1992, the religious composition in Romania, where approximately 23 million people live, is that presented in table below.

RELIGION	Population	Percentage
Orthodox	19,802,389	86.81
Roman Catholic	1,161,942	5.09
Protestant	802,454	3.52
Greek Catholic	223,327	0.98
Pentecostal	220,824	0.97
Baptist	109,462	0.48
Adventist	77,546	0.34
Unitarian	76,708	0.33
Muslim	55,928	0.25
Christian according to the Gospel	49,963	0.22
Evangelic of Augustian Confession	39,119	0.17
Christian of Old Rite	28,141	0.12
Orthodox of Old Style	32,228	0.14
Synodo-Presbiterian Evangelic	21,221	0.09
Jewish	9,670	0.04
Other religion	56,329	0.25
Atheists	10,331	0.05
Without religion	24,314	0.11
Not stated	8,139	0.04
TOTAL	22,810,035	100.00

Table 2. Romanian population by religion at January 7, 1992.

According to data from the table above, the Orthodox population is dominant; Catholics and other Christians account for about 12%, while percentages for Judaic, Muslim and other non-Christian religions are quite low (under 0.25% each).

Considering this information, a sample with 300 businesses located in all of eight counties (i.e., Bacau, Botosani, Galati, Iasi, Neamt, Suceava, Vaslui, and Vrancea) was drawn. The total number of questionnaires was allocated proportionally with the number of inhabitants living in each county (see table below).

COUNTY	Population	Percentage	Number of questionnaires handed
Bacau	741,119	15.42	45
Botosani	463,250	9.64	30
Galati	641,301	13.34	40
Iasi	812,488	16.90	50
Neamt	583,252	12.13	35
Suceava	706,409	14.70	45
Vaslui	464,176	9.66	30
Vrancea	394,879	8.21	25
TOTAL	4,806,874	100.00	300

Table 3. Territorial distribution of questionnaires.

For each county, a random sampling was performed using information from the Registers of Commerce available at each county Chamber of Commerce. We expected a 75% response rate, which would have provided 225 valid questionnaires.

Questionnaire Design and Data Collection

The survey consisted of three different parts. The first part is intended to gather information about the organization each respondent manages (i.e., structure of property, number of employees), and basic demographic data about the respondent (i.e., age, gender, monthly income he/she makes). A second part asks questions regarding the pattern of time spent, both in- and extra-professional (i.e., how much time the respondent dedicates for professional activity, what kind of leisure activities he/she engages in, and which are more or less important). Finally, a third part consists of questions about specific religious behaviour: (1) how often he/she attends church services, (2) how much time he/she spends at each service, and (3) what is his/her religious denomination.

The data collection process involved several stages. During the first stage, a number of 20 operators - undergraduate students majoring in Marketing at Alexandru Ioan Cuza University from Iasi - were asked to convey the questionnaires and cover letters to the addresses indicated. They were instructed to provide supplementary information for respondents, if necessary.

In a second stage, after reaching persons situated in top managerial positions, they were asked to agree to become subjects of the research. Each of those who agreed

was handed a cover letter and a questionnaire containing 15 different items (see Appendix B).

In a third stage, after collecting returned questionnaires, responses were analysed and entered into the statistical software package, SPSS/PC for tabulation and further analysis. Crosstabulations were used to analyze relationships between demographic and behavioural data (see Appendix C).

Out of 300 surveys distributed, 149 were received, and only 147 were valid; the return rate was 98%. The main cause for having 151 not returned questionnaires is quite simple: "the targeted firm is no longer in business". The reason behind the large number of firms going out of business is even more simple. During the 1990-1995 period, the Romanian government was trying to encourage entrepreneurs to start up new businesses. For encouragement, the government granted a 6-month profit tax exemption for new firms operating in a trade industry, and a 5-year profit tax exemption for new firms operating in a production industry. The exemption caused a real boom of new firms. The problem was that each "entrepreneur" was registering a new firm for 6-months, and let it die after it was no longer exempted from profit taxation. This "innovative" reaction led by 1995 to a very large number of registered firms, out of which

only a few were operating. One lesson from this experience, is that in designing future samples for this domain, along with information from Chambers of Commerce, information shoul be used from tax collecting institutions which operate exclusively with "living" firms.

Ethical Considerations

This research counted on the free choice of people to participate or not, and to declare or not their religious belief and behaviour. Subjects (top executives) were asked about their willingness to be included among respondents and to specify their allocation of leisure time. Respondents were assured that the privacy of responses would be respected. The questionnaire survey method offers credible assurance of anonymity. Thus, sincere answers about sensitive issues of private life are encouraged.

In interpreting the data obtained, impartiality prevailed. The questionnaire had no bias and no tendency to favour one religious denomination or another. It was not influenced by any governmental policy. Questions were formulated so that answers would not differ according to respondents' personalities.

VI.4. Breakdown of the Questionnaire

The questionnaire was built up out of 15 items and asked several types of questions (see Appendix B). The demographic data permitted an adequate interpretation of the indicators expressing the main behaviour. Most questions are of the multiple-choice type; this type limits the probability of invalid responses and makes it easier to answer.

Questions 1, 2, 12, 13, 14, and 15 were intended to provide identification information about respondents.

1. The ownership structure of your firm is :

a.	100% government	30 (20.7%)
b.	mostly government	12 (8.3%)
c.	50% private	2 (1.4%)
d.	mostly private	11 (7.6%)
e.	100% private	88 (60.7%)
f.	other:_____	2 (1.4%)

2. The number of employees in your firm is :

a.	0-5	39 (26.5%)
b.	6-25	30 (20.4%)
c.	26-50	19 (12.9%)
d.	51-100	12 (8.2%)
e.	101-500	24 (16.3%)
f.	over 500	23 (15.6%)

12. Gender :

M	125 (85.0%)
F	22 (15.0%)

13. Your age is :

a.	Under 30	23 (15.6%)
b.	31-39	30 (20.4%)
c.	40-49	71 (48.3%)
d.	50-59	21 (14.3%)
e.	60-69	2 (1.4%)
f.	over 70	0 (0.0%)

14. Your monthly average net income (in lei, the Romanian currency) is :

a.	under 250,000	13 (9.1%)
b.	250,001-500,000	63 (44.1%)
c.	500,001-750,000	39 (27.3%)
d.	750,001-1,000,000	7 (4.9%)
e.	1,000,001-1,500,000	5 (3.5%)
e.	1,500,001-2,500,000	6 (4.2%)
f.	over 2,500,000	10 (7.0%)

15. Your religion is :

a.	Catholic	14 (9.5%)
b.	Muslim	0 (0.0%)
c.	Orthodox	129 (87.8%)
d.	Jewish	2 (1.4%)
e.	Protestant	1 (0.7%)
f.	other:_____	1 (0.7%)

Question 7 and Question 8 are intended to provide the most important information about the religious behaviour of respondents.

7. How often do you attend religious services, excepting those related to baptisms, weddings or burials?

a.	daily	0 (0.0%)
b.	weekly	13 (8.8%)
c.	1-2 times per month	36 (24.5%)
d.	3-4 times per year	29 (19.7%)
e.	1-2 times per year	36 (24.5%)
f.	once in 2-3 years	13 (8.8%)
g.	never	20 (13.6%)

8. On average, when you attend a religious service, how long do you stay there?

a.	10-15 minutes	26 (17.7%)
b.	30 minutes	43 (29.3%)
c.	45 minutes	6 (4.1%)
d.	1 hour	24 (16.3%)
e.	1 1/2 hours	12 (3.2%)
f.	2 hours	14 (9.5%)
g.	3 hours and over	2 (1.4%)
h.	not at all	20 (13.6%)

Questions 6a, 6b, and 10 are intended to check the reliability of answers given for Questions 7 and 8.

VI.5. Sample Description

Answers given to demographic questions allow us to describe the group of top managers who agreed to participate. This description must consider *religious denomination* as the most important characteristic, along

with other variables which could influence religious behaviour, such as *gender* and *age*. Also, relevant information include the *ownership structure* of the firm and *the number of employees*. Data describing the sample obtained were tabulated using the FREQUENCIES and CROSSTABS procedures from SPSS/PC package. The SPSS report is presented in Appendix D.

With regard to religious denomination, the sample structure is quite close to the structure for the entire population living in Romania. Most of the respondents are Orthodox, while all other denominations count for only 12% of the total number of respondents (see table below).

RELIGION	NUMBER OF RESPONDENTS	PERCENTAGE
Orthodox	129	87.8
Catholic	14	9.5
Jewish	2	1.4
Protestant	1	0.7
Adventist	1	0.7
TOTAL	147	100.0

Table 4. Sample structure by religious denomination.

Gender and age could also have a strong influence over individual religious behaviour. In this survey, 85% of the respondents are male, while persons within the "40-49" age group are almost 50% of the sample. Precise information is presented in the next tables.

GENDER	NUMBER OF RESPONDENTS	PERCENTAGE
Male	125	85.0
Female	22	15.0
TOTAL	147	100.0

Table 5. Sample structure by gender.

AGE GROUP	NUMBER OF RESPONDENTS	PERCENTAGE
Under 30	23	15.6
30-39	30	20.4
40-49	71	48.3
50-59	21	14.3
60-69	2	1.4
TOTAL	147	100.0

Table 6. Sample structure by age.

Religion	Orthodox		Catholic		Jewish		Protestant		Adventist		TOTAL	
Age group	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Under 30	14	5	3	1	-	-	-	-	-	-	17	6
30-39	20	8	1	-	-	-	-	-	1	-	22	8
40-49	60	3	3	2	1	1	-	1	-	-	64	7
50-59	16	1	4	-	-	-	-	-	-	-	20	1
60-69	2	-	-	-	-	-	-	-	-	-	2	-
Total	112	17	11	3	1	1	-	1	1	-	125	22

Table 7. Sample structure by religion, gender and age.

Two other important variables for sample description are (1) the structure of property, which could range from "100% government owned" to "100% private owned", and (2) the number of subordinated employees, which could range from very few to several hundred.

Number of employees Ownership structure	1-5	6-25	26-50	51-100	101-500	Over 500	TOTAL
100% government	2	1	2	5	8	12	30
Mostly government	-	-	-	-	5	7	12
50% private	-	-	1	-	1	-	2
Mostly private	3	4	2	-	1	1	11
100% private	33	23	14	7	8	3	88
Other	1	-	-	-	1	-	2
TOTAL	39	28	19	12	24	23	145

Table 8. Sample structure by ownership structure and number of employees.

While the number of Orthodox respondents suffice for testing the initial hypothesis, the numbers for Catholic, Jewish and Protestant managers are too small to form a representative sample for those segments. The main cause is the religious composition of entire Romanian population. Enlarging the sample would not improve significantly the representativeness; the total number of Protestant or Jewish inhabitants is very low, and the number of those situated in top managerial positions is even lower. One viable solution - if resources suffice - is to extend the surveyed area beyond Romanian national borders in countries where population structure is more convenient.

VI.6. Results

To see if survey results support initial hypotheses, an initial sample breakdown into religious categories was performed. Then, responses describing religious behaviour were tabulated for each denomination, and comparisons were made between religions.

Some of the conclusions drawn from this survey are presented in the next paragraphs. An SPSS/PC report presenting the results of tabulation and crosstabulation is included in Appendix E.

Within each denomination, respondents are considered "strong believers" if they participate in religious services at least 1-2 times per month, "average believers" if attendance is 1-4 times per year, and "light believers" or "deviants" if they do not participate at all in church service or participate only ocasionally (once in 3-4 years).

According to this categorization, survey results show that Protestant and Adventist respondents behave as very "strong believers"; they attend church service every week, and allocate over 3 hours for each participation (see tables 9-12, and figures 12-15).

Church attendance	weekly	1-2 times per month	3-4 times per year	1-2 times per year	once in 3-4 years	never
Number of respondents	1	-	-	-	-	-
Percentage	100	-	-	-	-	-

Table 9. Distribution of Protestant respondents by church attendance.

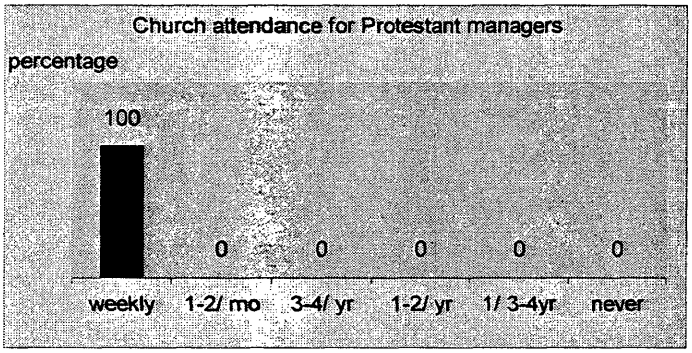

Fig.12 Church attendance for Protestant respondents.

Time spent for each religious service	over 3 hours	2 hours	1.5 hours	1 hour	45 minutes	30 minutes	10-15 minutes	not at all
Number of respondents	1	-	-	-	-	-	-	-
Percentage	100	-	-	-	-	-	-	-

Table 10. Distribution of Protestant respondents by time spent for each religious service attended.

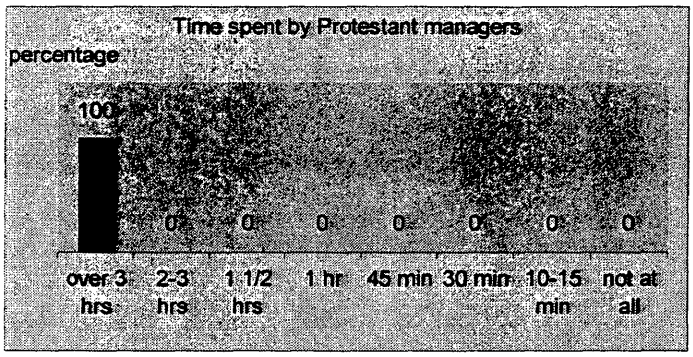

Fig.13 Time spent by Protestant respondents in each participation at religious service.

Church attendance	weekly	1-2 times per month	3-4 times per year	1-2 times per year	once in 3-4 years	never
Number of respondents	1	-	-	-	-	-
Percentage	100	-	-	-	-	-

Table 11. Distribution of Adventist respondents by church attendance.

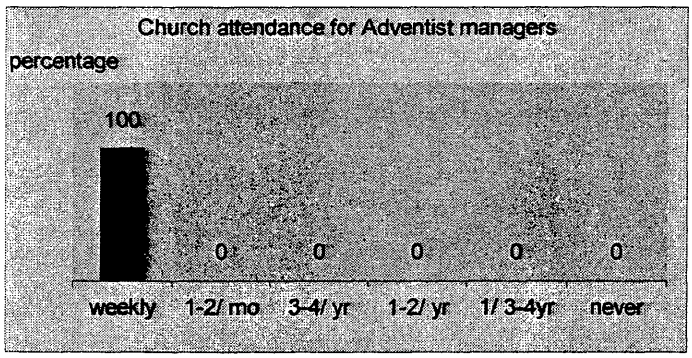

Fig.14 Church attendance for Adventist respondents.

Time spent for each religious service	over 3 hours	2 hours	1.5 hours	1 hour	45 minutes	30 minutes	10-15 minutes	not at all
Number of respondents	1	-	-	-	-	-	-	-
Percentage	100	-	-	-	-	-	-	-

Table 12. Distribution of Adventist respondents by time spent for each religious service attended.

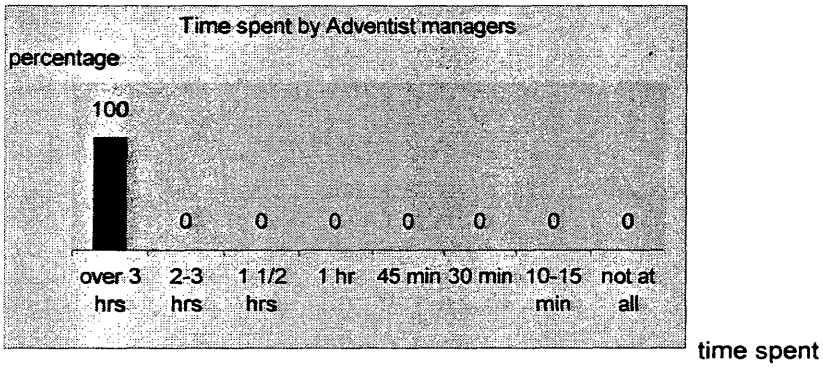

Fig.15 Time spent by Adventist respondents in each participation at religious service.

Jewish respondents attend synagogue service only 1-2 times per year and spend over one hour (see tables 13-14, and figures 16-17). From this perspective, they can be considered as being "average believers".

Church attendance	weekly	1-2 times per month	3-4 times per year	1-2 times per year	once in 3-4 years	never
Number of respondents	-	-	-	2	-	-
Percentage	-	-	-	100	-	-

Table 13. Distribution of Jewish respondents by church attendance.

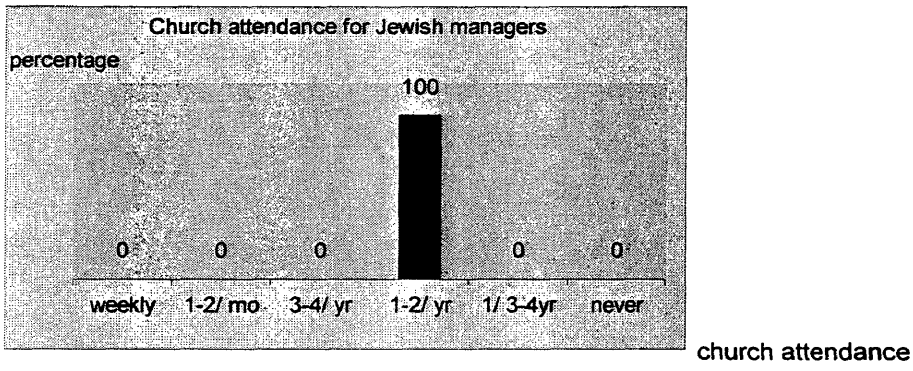

Fig.16 Church attendance for Jewish respondents.

Time spent for each religious service	Over 3 hours	2 hours	1.5 hours	1 hour	45 minutes	30 minutes	10-15 minutes	not at all
Number of respondents	-	1	-	1	-	-	-	-
Percentage	-	50	-	50	-	-	-	-

Table 14. Distribution of Jewish respondents by time spent for each religious service attended.

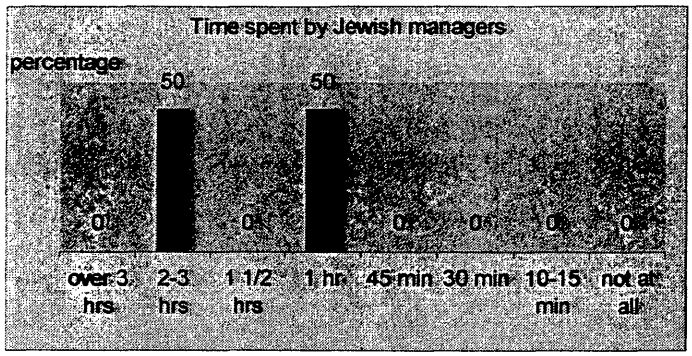

Fig.17 Time spent by Jewish respondents in each participation at religious service.

A large majority of Catholic respondents (57.1%) attend church at least 1-2 times per month, and allocate more than one hour for taking part in service; 28.5% of them participate 1-4 times per year. Only 14.3% can be considered "light believers" because take part in this type of activity once in 3-4 years. Nevertheless, none of the Catholic respondents declared complete non-participation (see tables 15-16, and figures 18-19).

Church attendance	Weekly	1-2 times per month	3-4 times per year	1-2 times per year	once in 3-4 years	never
Number of respondents	3	5	1	3	2	-
Percentage	21.4	35.7	7.1	21.4	14.3	-

Table 15. Distribution of Catholic respondents by church attendance.

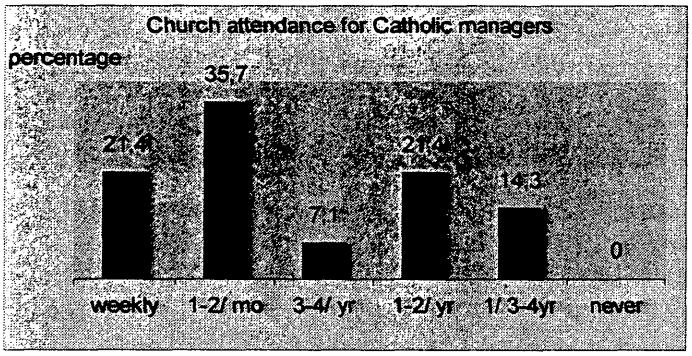

Fig.18 Church attendance for Catholic respondents.

Time spent for each religious service	Over 3 hours	2 hours	1.5 hours	1 hour	45 minutes	30 minutes	10-15 minutes	not at all
Number of respondents	-	1	3	4	1	4	1	-
Percentage	-	7.1	21.4	28.6	7.1	28.6	7.1	-

Table 16. Distribution of Catholic respondents by time spent for each religious service attended.

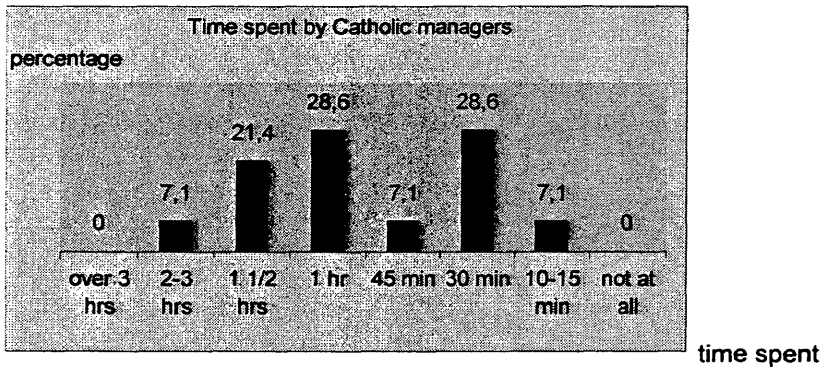

Fig.19 Time spent by Catholic respondents in each participation at religious service.

The Orthodox sample can be divided into 30.2% "strong believers", 45.7% "average believers", and 24% "light believers". Within the last sub-group, 15.5% of the respondents declared that they never take part in religious service (see tables 17-18, and figures 20-21).

Church attendance	Weekly	1-2 times per month	3-4 times per year	1-2 times per year	once in 3-4 years	never
Number of respondents	8	31	28	31	11	20
Percentage	6.2	24.0	21.7	24.0	8.5	15.5

Table 17. Distribution of Orthodox respondents by church attendance.

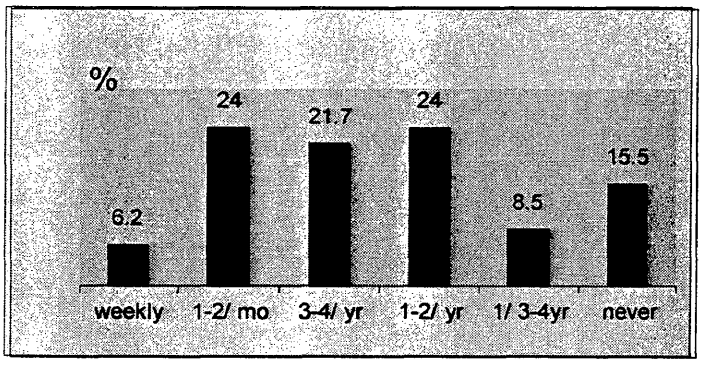

Fig.20 Church attendance for Orthodox respondents.

Time spent for each religious service	Over 3 hours	2 hours	1.5 hours	1 hour	45 minutes	30 minutes	10-15 minutes	not at all
Number of respondents	-	12	9	19	5	39	25	20
Percentage	-	9.3	7.0	14.7	3.9	30.2	19.4	15.5

Table 18. Distribution of Orthodox respondents by time spent for each religious service attended.

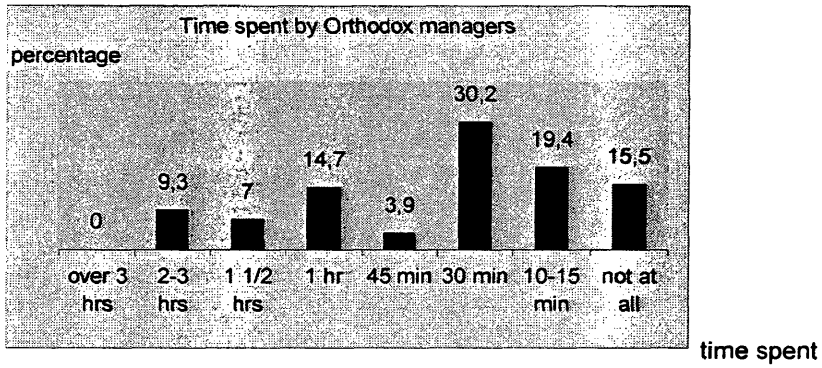

Fig.21 Time spent by Orthodox respondents in each participation at religious service.

Analyzing these results, it can be concluded that the empirical data support some of the initial hypotheses, but not others.

Thus, *Protestant managers prove to be "strong believers"* as was supposed initially. On the other hand, the two *Jewish managers seem to be only "average believers"* because they take part in religious service

only 1-2 times per year, which suggests a rather low devotion to religious morals; this result is even more surprising if we consider that both respondents are positioned within the "40-49" age group, in which we would expect a more frequent participation.

Most *of Catholic managers are "strong believers" and "average believers"*; only 14.3% of respondents declare an occasional participation, once in 3-4 years. Finally, the results regarding religious behaviour for Orthodox respondents confirm the initial hypothesis; 15.5% of them do not ever attend religious service, while other 8.5% do it only rarely, once in 3-4 years. Even though 45.7% of Orthodox respondents can be considered "average believers" and 30.2% "strong believers", these percentages are much lower than those for other religions considered in this survey.

VI.7. Limitations

Every emprirical research project is subject to potential errors in the questionnaire itself, and the sampling framework used. The potential for errors is even higher when the type of behaviour analysed is not easily observable. This survey is one of these cases; observing or measuring accurately an individual's attachment to religious values is difficult.

In analyzing possible limitations, it must be said that the exploratory and descriptive research may have inadvertently left out significant variables that would alter the final results. Thus, maybe it should have been taken into account that the Orthodox population is an overwhelming majority, while the others are very small minorities. It may be that religious behaviour is influenced by the status of being "majority" or "minority" within the whole population, and this effect was not considered in the current study.

The questionnaire used in survey may have limitations that will constrain or limit the accuracy of the resulting data. The questionnaire has room for errors because of the subjective nature of verbal interpretation. The same word may mean different things to different people, and it is impossible to guarantee that each respondent had interpreted questions in exactly the same way.

Other limitations might be induced by sampling errors. A sampling error is the difference between the observed value of a variable and the average of observed values in repetitions of the measurement. Sampling errors can be lessened by simply increasing the sample size. In these situations - assuming that questions were not biased - researchers would be able to better determine the true values for variables considered.

Non-sampling errors occur (1) when there are failures to survey parts of the designed sample and (2) when there are errors in using information from completed questionnaires. During this research, such non-sampling errors that could have been introduced are (1) misreading of completed questionnaires, (2) errors in coding responses, and (3) mistakes in data entry. Considering these possible sources, efforts were made to avoid any error.

All these limitations and constraints could have affected the precision of final results, although it is unlikely that all these sources of error have influenced this study.

VII. Conclusions

When approaching individual religious behaviour, we must distinguish first between an *end* which is pursued, and the *means* that can be used to attain it. While *afterlife salvation* is the major end pursued by any person who engages in religious activities, the ways he/she must follow towards it differ from one religious doctrine to another. Protestant and Judaic morals teach individuals to take initiative in ruling their worldly destiny. On the other hand, Catholicism and Orthodoxism have a vision of a pre-set destiny, individuals being unable of doing anything to improve it.

From the utility-maximization standpoint, we could say that religious norms influence an individual's preference between *willful behaviour* and *obedient behaviour*. They orientate the Pythagorean cone towards different areas of a budget line which describes possible options between the two alternatives for conducting our worldly life (see figure 22).

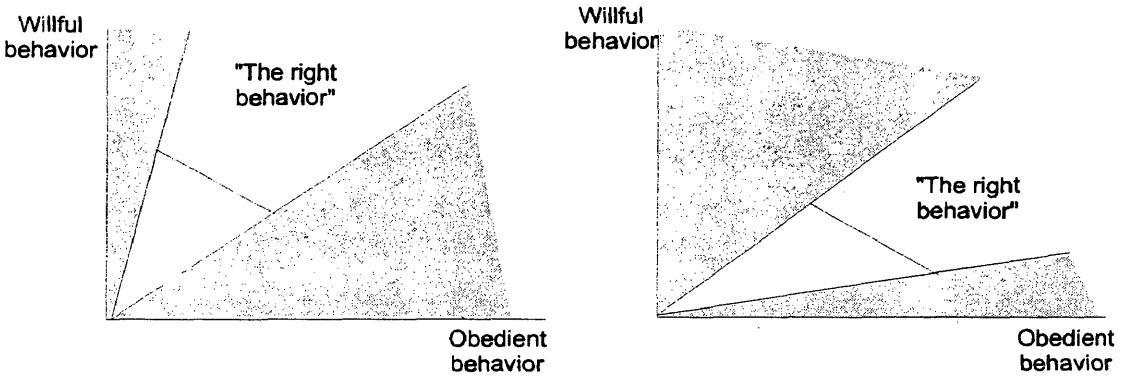

Fig.22 Examples of Pythagorean-cones with different orientations.

On the other hand, individuals who are working in top-managerial positions must adopt willful behaviour. Common sense suggests that managing a business requires having such attitude. In terms of the Pythagorean-cone, it means they maximize utility in the upper-left section of the budget line.

However, in the business world we can find persons from all religious denominations. The difference - which is at the same time the starting point in formulating our hypotheses - is that managers educated under religious norms which support a willful behavior will be "strong believers". On the other hand, managers who grew up in religions which support an obedient behaviour, will tend to be "light believers".

Starting from this observation, a research investigation was conducted using both exploratory and

descriptive types of research. At the end of the exploratory research, several hypotheses were formulated. For testing them, a survey was conducted.

The final results showed that some of the original hypotheses were slightly in error, while others are supported with empirical evidence.

This survey indicated that Orthodox top-managers are not characterized by a high level of devotion to Orthodox ethics - if this fidelity can be measured through their participation in religious services -, which preaches obedience as the only way of acquiring afterlife salvation.

Also, the results support the hypothesis made about Protestant managers. However, because of running into a sample non-representativeness problem, this aspect should benefit from further research.

The same difficulty and the same solution can be observed for the Jewish respondents sample. Results show they are rather "average believers". Their devotion to Judaic ethics - measured through participation at synagogue service - is much lower than expected.

Responses gathered from Catholic managers do not confirm the initial hypotheses, either. They participate quite often in religious services, which suggests they closely follow behavioural norms derived from Catholic preaching.

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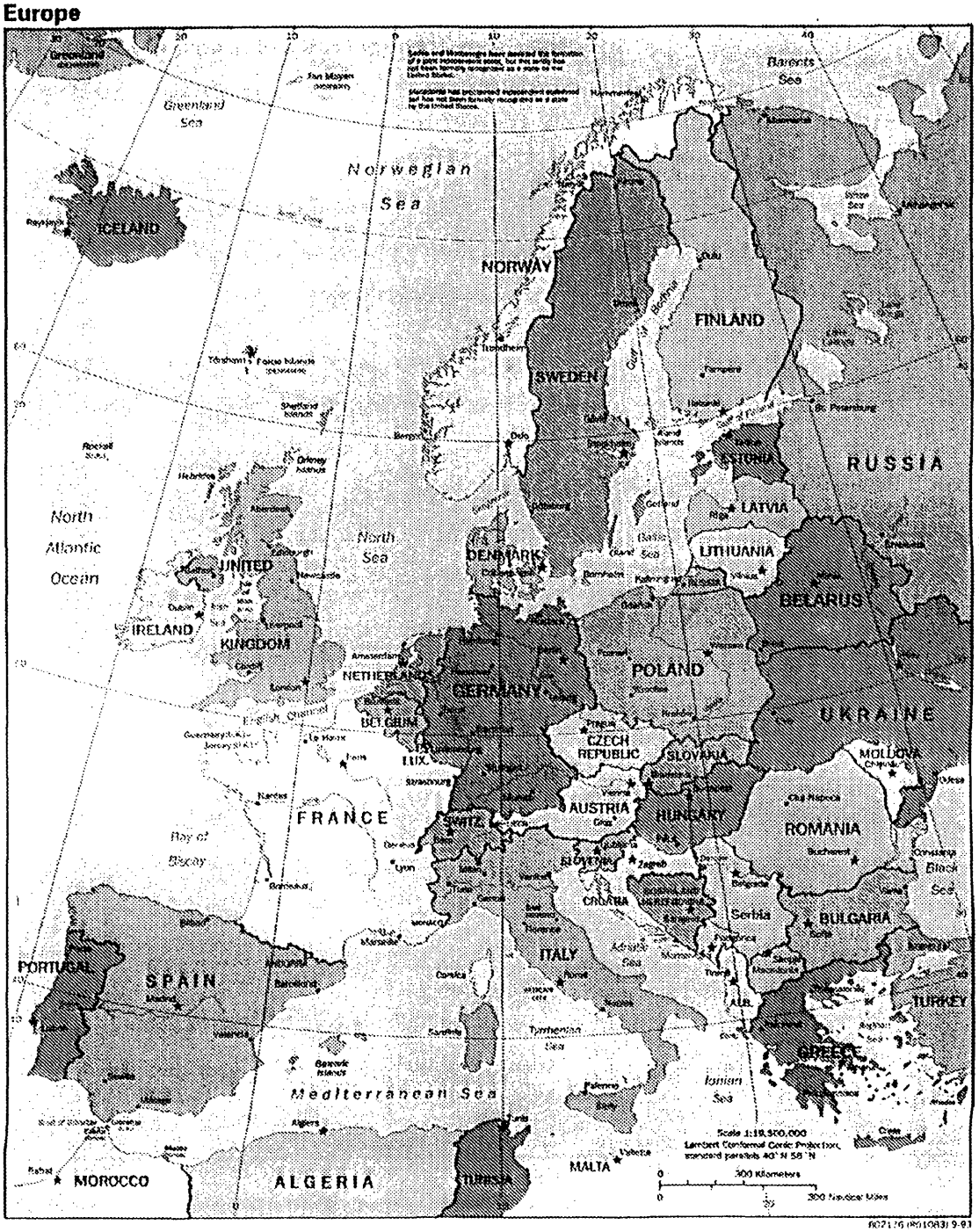
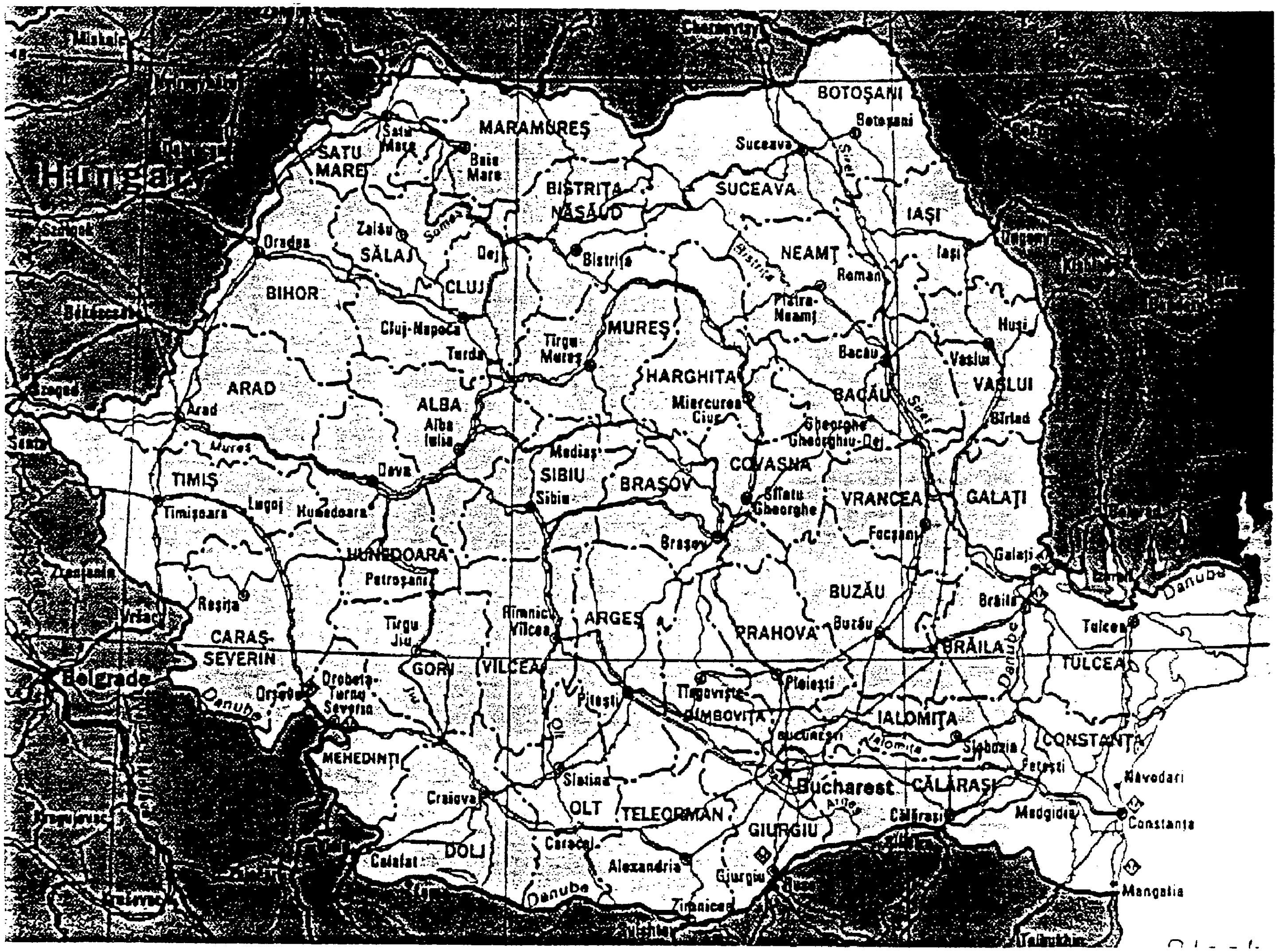
APPENDICES

APPENDIX A:

GEOGRAPHICAL EXTENT OF SURVEYED AREA

Europe


Greenland Sea
Barents Sea
Norwegian Sea
ICELAND
NORWAY
FINLAND
SWEDEN
RUSSIA
ESTONIA
LATVIA
LITHUANIA
BELARUS
North Atlantic Ocean
North Sea
DENMARK
UNITED KINGDOM
IRELAND
NETHERLANDS
GERMANY
POLAND
UKRAINE
BELGIUM
LUX.
FRANCE
CZECH REPUBLIC
SLOVAKIA
MOLDOVA
AUSTRIA
HUNGARY
ROMANIA
SWITZ.
Bay of Biscay
SLOVENIA
CROATIA
Serbia
BULGARIA
Black Sea
ITALY
PORTUGAL
SPAIN
TURKEY
GREECE
Tyrrhenian Sea
Ionian Sea
Mediterranean Sea
MALTA
MOROCCO
ALGERIA
TUNISIA
Scale 1:19,500,000
Lambert Conformal Conic Projection
standard parallels 40° N 55° N
300 Kilometers
300 Nautical Miles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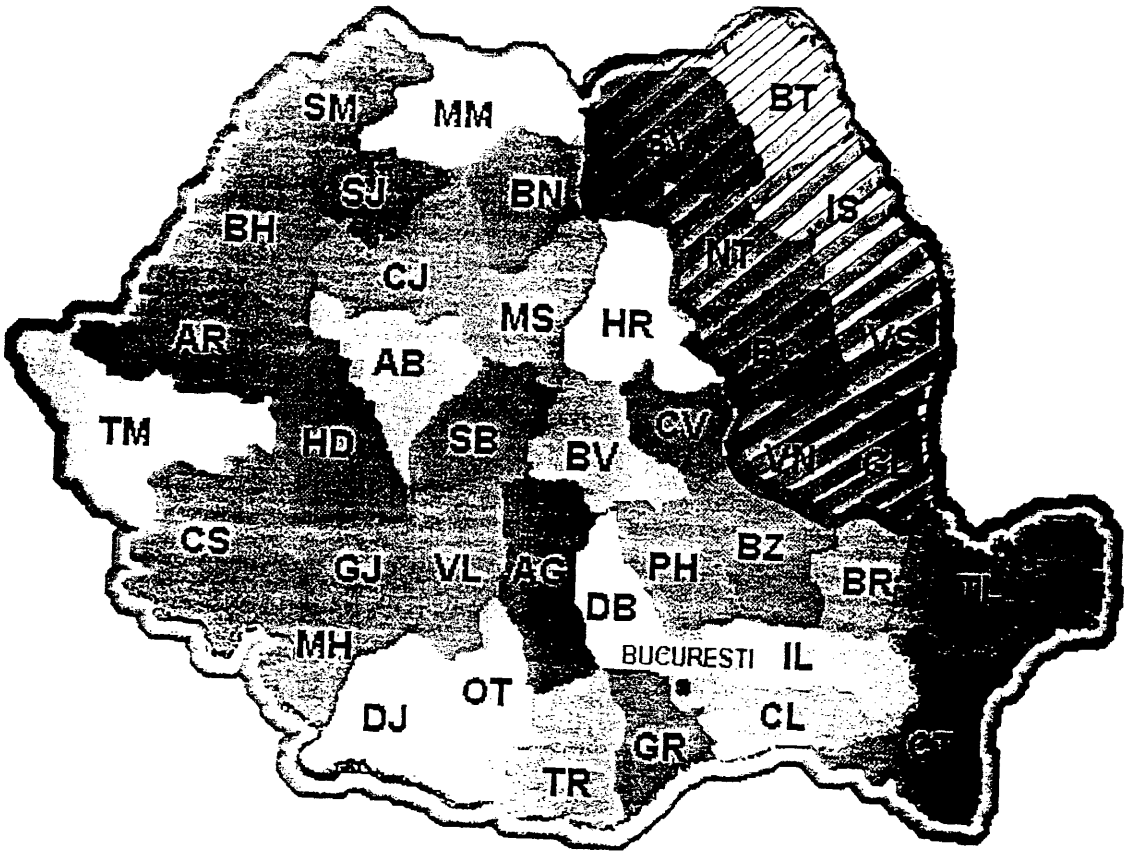
Belgrade
MARAMUREŞ
SATU MARE
Satu Mare
Baia Mare
BOTOŞANI
Botoşani
Suceava
SUCEAVA
IAŞI
Iaşi
BISTRIŢA NĂSĂUD
Bistriţa
Oradea
Zalău
SĂLAJ
Dej
CLUJ
Cluj-Napoca
Turda
BIHOR
NEAMŢ
Roman
Piatra-Neamţ
Bacău
BACĂU
Huşi
Vaslui
VASLUI
Bîrlad
MUREŞ
Tîrgu Mureş
HARGHITA
Miercurea Ciuc
Gheorghe Gheorghiu-Dej
ARAD
Arad
ALBA
Alba Iulia
Deva
Mureş
TIMIŞ
Timişoara
Lugoj
Hunedoara
HUNEDOARA
Mediaş
SIBIU
Sibiu
BRAŞOV
Braşov
COVASNA
Sfîntu Gheorghe
VRANCEA
Focşani
GALAŢI
Galaţi
Petroşani
Reşiţa
CARAŞ-SEVERIN
Tîrgu Jiu
GORJ
Rîmnicu Vîlcea
VÎLCEA
ARGEŞ
Piteşti
BUZĂU
Buzău
PRAHOVA
Ploieşti
Brăila
BRĂILA
Tulcea
TULCEA
Danube
Orşova
Drobeta-Turnu Severin
MEHEDINŢI
Tîrgovişte
DÎMBOVIŢA
IALOMIŢA
Slobozia
CONSTANŢA
Năvodari
Constanţa
Mangalia
Medgidia
Feteşti
Bucharest
CĂLĂRAŞI
Călăraşi
Craiova
Slatina
OLT
TELEORMAN
GIURGIU
Giurgiu
Alexandria
Zimnicea
Caracal
DOLJ
Calafat



Moldavia region

APPENDIX B:

COVER LETTER AND QUESTIONNAIRE

UNIVERSITATEA "AL. I. CUZA"
FACULTATEA DE ŞTIINŢE ECONOMICE
CATEDRA DE MANAGEMENT-MARKETING
Bulevardul Copou nr.11/6600 IAŞI

Tel.032.144760/115
Fax 032.146330
Telex 22371 ccui r
e-mail UAIC @ roearn.ici.ro

Domnule director,

În prezent, în cadrul catedrei de management şi marketing se desfăşoară un studiu având tema "Coordonate temporale ale activităţilor extraprofesionale ale directorilor de firmă".

Partea aplicativă a acestui studiu se realizează pe baza chestionării a 300-400 directori de societăţi comerciale din zona de est a României. Printre aceştia aţi fost inclus şi dumneavoastră pe baza unei selecţii aleatoare.

Vă rugăm deci să completaţi chestionarul care însoţeşte această scrisoare şi să îl înmânaţi în plic închis studentului-operator care vi l-a adus. Chestionarul este anonim iar informaţiile pe care ni le oferiţi sunt strict confidenţiale şi vor fi utilizate numai pentru scopul realizării studiului.

Pentru eventuale nelămuriri sau probleme puteţi solicita informaţii suplimentare la telefoanele: 032-144760/115 (serviciu) sau 032-174053 (acasă).

Având în vedere importanţa deosebită pe care o are pentru noi participarea dumneavoastră, sperăm că ne veţi sprijini şi vă mulţumim anticipat.

Cu respect,

26 iunie 1995

asist. univ. Corneliu Munteanu

1. Capitalul firmei pe care o conduceţi este:

a. integral de stat b. majoritar de stat c. 50% de stat
d. integral particular e. majoritar particular f. altul:.....

2. Numărul de angajaţi (aproximativ) la data completării chestionarului este:
a. 0-5 b. 6-25 c. 26-50 d. 51-100 e. 101-500 f. peste 500

3. Consideraţi că afacerile firmei dvs. merg:
1. f.bine 2. bine 3. mulţumitor 4. rău 5. nu pot aprecia

4. Câte zile pe săptămână alocaţi activităţii profesionale? ___zile

5a. În zilele lucrătoare, câte ore afectaţi zilnic serviciului dvs.? ___ore

5b. Dar duminica? ___ore

6a. Care din următoarele activităţi le efectuaţi în timpul dvs. liber?

a. activităţi sportive şi în aer liber
b. "o bere" cu prietenii
c. citirea ziarelor şi a revistelor
d. frecventarea lăcaşului de cult (biserică, moschee, sinagogă, templu)
e. lectură beletristică
f. vizionarea programelor de televiziune
g. concerte, spectacole, filme la cinematograf
h. alte activităţi: .....

6b. Vă rugăm să ierarhizaţi <u>activităţile pentru care aţi optat la întrebarea anterioară</u> în ordinea preferinţei dvs. (1- cea mai preferată, ş.a.m.d.)

1.___ 2.___ 3.___ 4.___ 5.___ 6.___ 7.___ 8.___

7. Cât de des mergeţi la biserică (sinagogă, moschee, templu) exceptând ocaziile legate de botezuri, căsătorii, înmormântări?

zilnic	săptămânal	1-2 ori pe lună	3-4 ori pe an	1-2 ori pe an	o dată la 2-3 ani	niciodată

8. De fiecare dată când mergeţi la biserică (sinagogă, moschee, templu), cât timp staţi acolo (aproximativ)?

10-15 minute	30 minute	45 minute	o oră	o oră şi jumătate	2 ore	3 ore şi peste

9. În perioada ianuarie 1994- iunie 1995 aţi susţinut financiar (prin sponsorizări şi donaţii):

	DA	NU
echipe sportive?		
case de copii orfani?		
manifestări culturale sau ştiinţifice?		
instituţii religioase?		
azile de bătrâni?		

10. Cât timp alocaţi săptămânal (în medie) următoarelor activităţi extraprofesionale?

	peste 5 ore	2-5 ore	1-2 ore	sub o oră	deloc
"o bere" cu prietenii					
vizionarea programelor de televiziune					
frecventarea lăcaşelor de cult					
activităţi sportive şi în aer liber					

11. Dacă aţi dispune de mai mult timp liber, ce alte activităţi aţi dori să realizaţi?

.....

.....

12. Sexul: B F

13. Vârsta
1. până in 30 ani
2. 30 - 39 ani
3. 40 - 49 ani
4. 50 - 59 ani
5. 60 -69 ani
6. peste 70 ani

14. Veniturile medii lunare nete pe care le realizaţi (lei):
1. până în 250.000
2. 250.001 - 500.000
3. 500.001 - 750.000
4. 750.001 - 1.000.000
5. 1.000.001 - 1.500.000
6. 1.500.001 - 2.500.000
7. peste 2.500.001

15. Apartenenţa religioasă:
a. catolică b. musulmană c. ortodoxă
d. mozaică e. protestantă f. alta:.....

VĂ MULŢUMIM!

Data aplicării: .....
Operator: .....

APPENDIX C:

SPSS/PC DATA FILE; SPSS/PC DATA DESCRIPTION FILE

QNUMBER	OWNST	NBEMPLOY	BUSPULSE	WORKDAYS	HOURDAY	HOURSUN	OTACTIV	CHURCHAT	TIMESP	CHECKQ	GENDER	AGE	INCOME	RELIGION
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2	5	1	3	7	14	3	27630000	5	2	4	1	1	3	3
3	5	3	2	7	10	4	36520000	5	3	5	1	2	3	3
4	5	2	1	7	10	4	13620000	3	5	4	1	3	3	3
5	2	5	2	6	10	0	13620000	4	3	5	1	3	2	3
6	5	3	2	7	10	4	62310000	5	3	5	1	2	2	3
7	1	3	2	7	12	6	65318000	5	2	4	1	3	2	3
8	5	5	3	7	12	6	36000000	7	1	0	1	3	3	3
9	5	1	4	3	3	0	13260000	5	5	4	1	4	1	3
10	5	1	2	7	10	3	13640000	3	4	3	1	2	5	3
11	1	1	2	7	9	4	13642000	3	6	4	1	3	2	3
12	5	2	1	7	13	4	64200000	4	4	1	1	4	7	3
13	5	1	2	7	11	5	81260000	4	3	0	1	3	2	3
14	5	6	2	7	11	6	36175000	7	1	5	1	3	2	3
15	5	6	2	7	11	4	23600000	4	3	0	1	3	3	3
16	5	3	3	7	14	10	36200000	7	1	0	1	3	2	3
17	5	5	2	7	16	4	36200000	4	5	4	1	3	0	3
18	5	5	2	6	14	0	16000000	4	2	4	1	3	3	3
19	5	2	3	7	12	3	67230000	5	3	4	1	1	2	3
20	4	2	3	7	8	2	53681000	2	2	4	2	3	2	3
21	4	3	3	7	12	5	12650000	4	3	4	1	2	3	3
22	1	6	3	7	10	4	26000000	6	2	0	1	2	3	3
23	5	1	3	6	8	0	16700000	6	3	0	1	1	1	3
24	5	2	2	7	16	10	82467000	3	2	4	1	3	6	3
25	1	6	3	6	10	0	36800000	4	7	5	1	3	3	3
26	4	1	2	7	10	4	64800000	3	7	2	2	2	1	3
27	1	6	3	7	10	3	13642000	3	2	4	1	3	3	3
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29	5	2	2	7	12	2	63200000	6	2	0	2	1	6	3
30	5	1	2	6	10	0	12600000	5	2	0	2	2	4	3
31	1	6	2	7	8	3	81356724	5	5	0	1	3	3	3
32	1	5	3	6	10	0	83167524	6	3	5	1	3	2	3
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34	5	1	2	7	8	4	83650000	5	3	5	2	1	2	3
35	2	5	3	7	9	5	56800000	3	5	4	2	3	2	3
36	5	2	2	7	16	12	10000000	4	2	0	1	2	7	3
37	5	1	5	6	10	0	84000000	2	7	3	2	1	5	3
38	4	2	3	7	18	6	50000000	5	5	0	1	3	2	3
39	4	1	3	7	10	8	83510000	4	3	0	1	2	6	3
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46	1	5	3	5	10	0	35620000	5	6	0	1	5	3	3
47	5	5	1	7	8	2	62300000	4	7	0	1	3	3	3
48	5	4	2	7	10	1	36000000	5	7	5	1	3	0	3
49	1	2	2	5	7	0	51368720	5	6	0	1	4	2	3

QNUMBER	OWNSTR	NBEMPLOY	BUSPULSE	WORKDAYS	HOURDAY	HOURSUN	OTACTIV	CHURCHAT	TIMESP	CHECKQ	GENDER	AGE	INCOME	RELIGION
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51	2	6	3	6	10	0	36254000		4	4	4	1	3	2	3
52	5	3	3	7	15	8	63200000		6	6	4	1	3	1	3
53	5	1	3	7	12	8	57000000		3	2	4	1	4	1	3
54	5	4	2	7	11	3	53600000		5	3	0	1	3	7	3
55	1	6	2	7	7	3	86000000		7	1	5	1	2	2	3
56	1	6	3	7	10	2	63452870		3	7	3	1	4	2	3
57	5	3	2	7	10	4	23610000		4	5	3	1	3	3	3
58	1	4	3	7	5	2	17000000		5	3	0	1	4	3	3
59	1	3	3	5	9	0	36500000		5	2	5	1	3	2	3
60	1	5	3	7	9	5	16753420		5	3	0	1	3	3	3
61	6	5	2	5	10	0	63580000		4	5	3	1	3	3	3
62	1	4	4	1	4	0	83547621		4	5	3	1	4	2	3
63	2	6	2	3	10	0	13624578		3	5	4	1	3	3	3
64	2	6	3	7	10	4	17534682		3	2	4	1	3	3	3
65	5	1	5	7	11	4	68000000		3	2	0	1	1	1	3
66	1	5	3	7	12	6	37610000		5	5	0	1	3	2	3
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68	5	2	2	6	10	0	35000000		6	2	4	1	3	4	3
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70	4	2	3	7	12	12	36251000		6	7	5	1	3	2	3
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93	5	3	2	7	10	2	0		5	5	0	1	3	2	3
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96	5	2	2	7	10	5	53168000		4	7	0	2	2	7	3
97	5	1	2	5	10	0	53160000		3	4	4	1	3	3	3
98	4	2	3	7	12	4	15630000		5	3	0	1	1	2	3

QNUMBER	OWNSTR	NBEMPLOY	BUSPULSE	WORKDAYS	HOURDAY	HOURSUN	OTACTIV	CHURCHAT	TIMESP	CHECKQ	GENDER	AGE	INCOME	RELIGION
99	5	4	1	2	10	0	34600000	2	3	4	1	3	3	3
100	3	3	3	5	8	0	35600000	5	3	4	1	3	2	3
101	3	5	2	5	8	0	36280000	4	3	4	1	3	2	3
102	5	3	3	7	12	6	13600000	4	3	4	1	1	6	3
103	5	2	3	7	12	6	36175240	4	2	5	1	1	7	3
104	5	2	3	7	11	6	13520000	5	2	0	1	2	3	3
105	5	3	2	7	10	2	81324765	4	5	5	1	2	7	3
106	5	1	3	7	8	4	36217800	5	6	5	1	1	2	3
107	5	4	2	6	10	0	12360000	3	3	3	2	2	2	3
108	5	1	3	6	8	0	36124000	2	3	4	1	3	2	3
109	4	6	3	6	9	0	15682374	4	2	0	2	4	2	3
110	1	6	3	7	10	4	36280000	3	3	4	1	3	2	3
111	1	5	3	7	10	5	86000000	6	3	5	1	3	2	3
112	1	6	5	5	9	0	36400000	3	6	4	1	3	2	3
113	5	2	3	7	12	8	16320000	5	3	0	1	2	2	3
114	5	1	3	7	10	8	35682000	7	1	5	1	4	3	3
115	5	2	2	7	14	6	18326000	7	1	5	1	2	2	3
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128	5	2	3	6	11	0	16438000	3	2	4	1	3	2	3
129	5	2	2	7	10	4	16832000	4	5	4	1	3	2	3
130	5	1	1	6	7	0	13560000	5	3	0	2	3	1	3
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134	5	1	3	7	18	9	56170000	3	3	4	1	3	5	1
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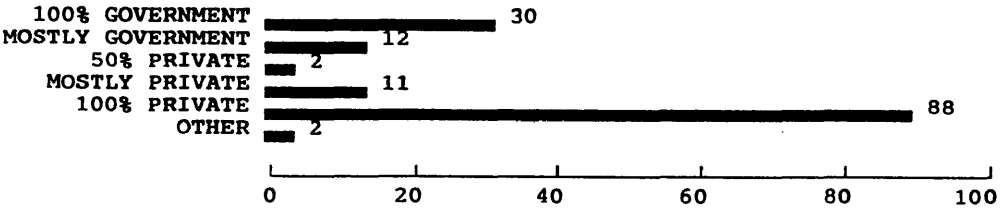
```
   MORE=ON/ EJECT=ON.

DATA LIST FILE = "A:THESIS.DAT"/
QNUMBER 1-3 OWNSTR 4 NBEMPLOY 5 BUSPULSE 6 WORKDAYS 7
HOURDAY 8-9 HOURSUN 10-11 OTACTIV 12-19
CHURCHAT 20 TIMESP 21 CHECKQ 22
GENDER 23 AGE 24 INCOME 25 RELIGION 26.

VARIABLE LABELS
OWNSTR 'OWNERSHIP STRUCTURE'/ NBEMPLOY 'NUMBER OF EMPLOYEES'/
WORKDAYS '# WORKDAYS PER WEEK'/ CHURCHAT 'CHURCH ATTENDANCE'/
TIMESP 'TIME SPENT IN RELIGIOUS SERVICE'/ GENDER 'GENDER'/
AGE 'AGE GROUP'/ RELIGION 'RELIGIOUS DENOMINATION'.

VALUE LABELS
OWNSTR 1 '100% GOVERNMENT' 2 'MOSTLY GOVERNMENT' 3 '50% PRIVATE'
       4 'MOSTLY PRIVATE' 5 '100 PRIVATE' 6 'OTHER'/
NBEMPLOY 1 '1-5' 2 '6-25' 3 '26-50' 4 '51-100' 5 '101-500' 6 'OVER 500'/
WORKDAYS 1 'ONE/WEEK' 2 'TWO/WEEK' 3 'THREE/WEEK' 4 'FOUR/WEEK'
         5 'FIVE/WEEK' 6 'SIX/WEEK' 7 'SEVEN/WEEK'/
CHURCHAT 1 'DAILY' 2 'WEEKLY' 3 '1-2 TIMES PER MONTH' 4 '3-4 TIMES PER YEAR'
          5 '1-2 TIMES PER YEAR' 6 'ONCE IN 3-4 YEARS' 7 'NEVER'/
TIMESP 1 'NOT AT ALL' 2 '10-15 MINUTES' 3 '30 MINUTES' 4 '45 MINUTES'
       5 '1 HOUR' 6 '1 1/2 HOURS' 6 '2 HOURS' 7 'OVER 3 HOURS'/

WARNING   267, TEXT: 2 HOURS
MULTIPLE LABELS SPECIFIED FOR ONE VALUE--The VALUE LABELS command
specifies a given value more than once for a given set of variables.  The
label appearing with the first occurrence of the value will be retained.

GENDER 1 'MALE' 2 'FEMALE'/
AGE 1 'UNDER 30' 2 '30-39' 3 '40-49' 4 '50-59' 5 '60-69'/
RELIGION 1 'CATHOLIC' 2 'MUSLIM' 3 'ORTHODOX' 4 'JEWISH'
         5 'PROTESTANT' 6 'OTHER'.

MISSING VALUE QNUMBER (0) OWNSTR (0) NBEMPLOY (0)
              BUSPULSE (0) WORKDAYS (0) CHURCHAT (0) TIMESP (0)
              CHECKQ (0) GENDER (0) AGE (0) INCOME (0) RELIGION (0).


RECODE OWNSTR (4=5) (5=4).

FREQUENCIES VARIABLES=OWNSTR NBEMPLOY WORKDAYS GENDER AGE RELIGION /
The raw data or transformation pass is proceeding
    147 cases are written to the compressed active file.
BARCHART/ FORMAT=NEWPAGE.

***** Memory allows a total of  17873 Values, accumulated across all Variables.
      There also may be up to    2234 Value Labels for each Variable.
```

APPENDIX D:

SPSS/PC REPORT: DEMOGRAPHICAL DESCRIPTION OF SAMPLE

OWNSTR OWNERSHIP STRUCTURE

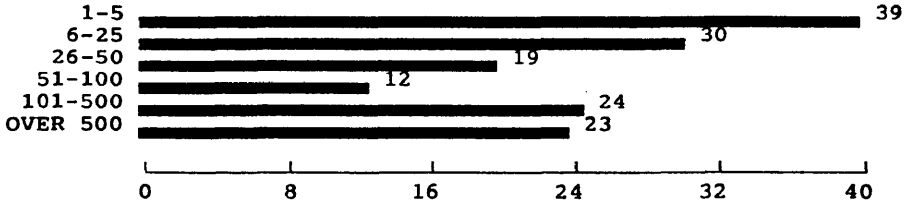
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
100% GOVERNMENT	1	30	20.4	20.7	20.7
MOSTLY GOVERNMENT	2	12	8.2	8.3	29.0
50% PRIVATE	3	2	1.4	1.4	30.3
MOSTLY PRIVATE	4	11	7.5	7.6	37.9
100% PRIVATE	5	88	59.9	60.7	98.6
OTHER	6	2	1.4	1.4	100.0
	0	2	1.4	Missing	
	Total	147	100.0	100.0	



Valid cases 145 Missing cases 2

NBEMPLOY NUMBER OF EMPLOYEES

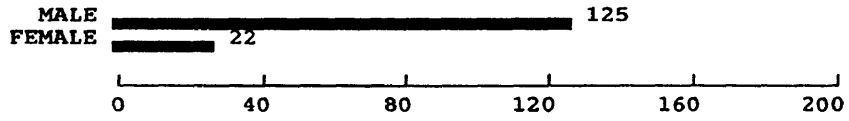
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
1-5	1	39	26.5	26.5	26.5
6-25	2	30	20.4	20.4	46.9
26-50	3	19	12.9	12.9	59.9
51-100	4	12	8.2	8.2	68.0
101-500	5	24	16.3	16.3	84.4
OVER 500	6	23	15.6	15.6	100.0
	Total	147	100.0	100.0	



Valid cases 147 Missing cases 0

GENDER GENDER

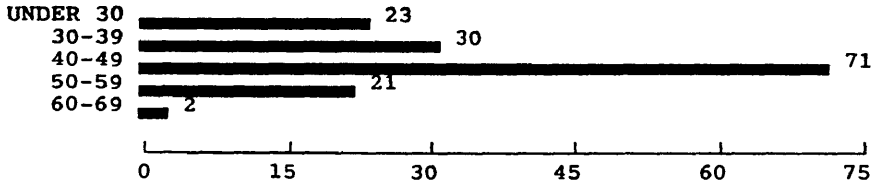
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
MALE	1	125	85.0	85.0	85.0
FEMALE	2	22	15.0	15.0	100.0
	Total	147	100.0	100.0	



Valid cases 147 Missing cases 0

AGE AGE GROUP

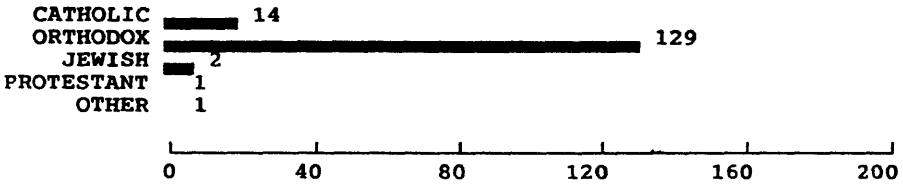
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
UNDER 30	1	23	15.6	15.6	15.6
30-39	2	30	20.4	20.4	36.1
40-49	3	71	48.3	48.3	84.4
50-59	4	21	14.3	14.3	98.6
60-69	5	2	1.4	1.4	100.0
	Total	147	100.0	100.0	



Valid cases 147 Missing cases 0

RELIGION RELIGIOUS DENOMINATION

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
CATHOLIC	1	14	9.5	9.5	9.5
ORTHODOX	3	129	87.8	87.8	97.3
JEWISH	4	2	1.4	1.4	98.6
PROTESTANT	5	1	.7	.7	99.3
OTHER	6	1	.7	.7	100.0
	Total	147	100.0	100.0	



Valid cases 147 Missing cases 0

AGE AGE GROUP by GENDER GENDER
Controlling for..
RELIGION RELIGIOUS DENOMINATION Value = 1 CATHOLIC

	GENDER		Page 1 of 1
Count / Row Pct / Col Pct / Tot Pct	MALE 1	FEMALE 2	Row Total
AGE			
1 UNDER 30	3 75.0 27.3 21.4	1 25.0 33.3 7.1	4 28.6
2 30-39	1 100.0 9.1 7.1		1 7.1
3 40-49	3 60.0 27.3 21.4	2 40.0 66.7 14.3	5 35.7
4 50-59	4 100.0 36.4 28.6		4 28.6
Column Total	11 78.6	3 21.4	14 100.0

AGE AGE GROUP by GENDER GENDER
Controlling for..
RELIGION RELIGIOUS DENOMINATION Value = 4 JEWISH

	GENDER		Page 1 of 1
Count / Row Pct / Col Pct / Tot Pct	MALE 1	FEMALE 2	Row Total
AGE			
3 40-49	1 50.0 100.0 50.0	1 50.0 100.0 50.0	2 100.0
Column Total	1 50.0	1 50.0	2 100.0

AGE AGE GROUP by GENDER GENDER
Controlling for..
RELIGION RELIGIOUS DENOMINATION Value = 3 ORTHODOX

GENDER Page 1 of 1

AGE	Count / Row Pct / Col Pct / Tot Pct	MALE 1	FEMALE 2	Row Total
UNDER 30	1	14 73.7 12.5 10.9	5 26.3 29.4 3.9	19 14.7
30-39	2	20 71.4 17.9 15.5	8 28.6 47.1 6.2	28 21.7
40-49	3	60 95.2 53.6 46.5	3 4.8 17.6 2.3	63 48.8
50-59	4	16 94.1 14.3 12.4	1 5.9 5.9 .8	17 13.2
60-69	5	2 100.0 1.8 1.6		2 1.6
	Column Total	112 86.8	17 13.2	129 100.0

AGE AGE GROUP by GENDER GENDER
Controlling for..
RELIGION RELIGIOUS DENOMINATION Value = 5 PROTESTANT

	GENDER	Page 1 of 1
Count / Row Pct / Col Pct / Tot Pct	FEMALE	Row Total
AGE	2	
3	1	1
40-49	100.0	100.0
	100.0	
	100.0	
Column Total	1 100.0	1 100.0

AGE AGE GROUP by GENDER GENDER
Controlling for..
RELIGION RELIGIOUS DENOMINATION Value = 6 OTHER

	GENDER	Page 1 of 1
Count / Row Pct / Col Pct / Tot Pct	MALE	Row Total
AGE	1	
2	1	1
30-39	100.0	100.0
	100.0	
	100.0	
Column Total	1 100.0	1 100.0

Number of Missing Observations: 0

APPENDIX E:

SPSS/PC REPORT: DESCRIPTION OF RELIGIOUS BEHAVIOUR

CHURCHAT CHURCH ATTENDANCE by RELIGION RELIGIOUS DENOMINATION

RELIGION

CHURCHAT	Count / Row Pct / Col Pct / Tot Pct	CATHOLIC 1	ORTHODOX 3	JEWISH 4	PROTESTANT 5	OTHER 6	Row Total
WEEKLY	2	3 23.1 21.4 2.0	8 61.5 6.2 5.4		1 7.7 100.0 .7	1 7.7 100.0 .7	13 8.8
1-2 TIMES PER MO	3	5 13.9 35.7 3.4	31 86.1 24.0 21.1				36 24.5
3-4 TIMES PER YE	4	1 3.4 7.1 .7	28 96.6 21.7 19.0				29 19.7
1-2 TIMES PER YE	5	3 8.3 21.4 2.0	31 86.1 24.0 21.1	2 5.6 100.0 1.4			36 24.5
ONCE IN 3-4 YEAR	6	2 15.4 14.3 1.4	11 84.6 8.5 7.5				13 8.8
NEVER	7		20 100.0 15.5 13.6				20 13.6
	Column Total	14 9.5	129 87.8	2 1.4	1 .7	1 .7	147 100.0

Chi-Square	Value	DF	Significance
Pearson	35.21318	20	.01900
Likelihood Ratio	25.24767	20	.19212
Mantel-Haenszel test for linear association	.47583	1	.49032

Minimum Expected Frequency - .088
Cells with Expected Frequency < 5 - 24 OF 30 (80.0%)

Number of Missing Observations: 0

TIMESP TIME SPENT IN RELIGIOUS SERVICE by RELIGION RELIGIOUS DENOMINATION

TIMESP	RELIGION					
	Count / Row Pct / Col Pct / Tot Pct	CATHOLIC 1	ORTHODOX 3	JEWISH 4	PROTESTA NT 5	OTHER 6	Row Total
NOT AT ALL	1		20 100.0 15.5 13.6				20 13.6
10-15 MINUTES	2	1 3.8 7.1 .7	25 96.2 19.4 17.0				26 17.7
30 MINUTES	3	4 9.3 28.6 2.7	39 90.7 30.2 26.5				43 29.3
45 MINUTES	4	1 16.7 7.1 .7	5 83.3 3.9 3.4				6 4.1
1 HOUR	5	4 16.7 28.6 2.7	19 79.2 14.7 12.9	1 4.2 50.0 .7			24 16.3
1 1/2 HOURS	6	3 25.0 21.4 2.0	9 75.0 7.0 6.1				12 8.2
2 HOURS	7	1 7.1 7.1 .7	12 85.7 9.3 8.2	1 7.1 50.0 .7			14 9.5
OVER 3 HOURS	8				1 50.0 100.0 .7	1 50.0 100.0 .7	2 1.4
	Column Total	14 9.5	129 87.8	2 1.4	1 .7	1 .7	147 100.0

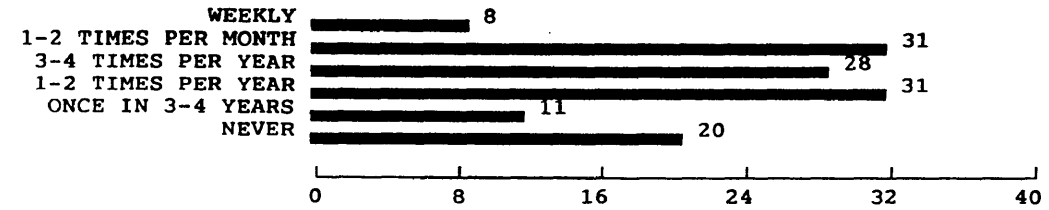
Chi-Square	Value	DF	Significance
Pearson	161.79079	28	.00000
Likelihood Ratio	36.09835	28	.14011
Mantel-Haenszel test for linear association	.01384	1	.90634

Minimum Expected Frequency - .014
Cells with Expected Frequency < 5 - 33 OF 40 (82.5%)

Number of Missing Observations: 0

CHURCHAT CHURCH ATTENDANCE

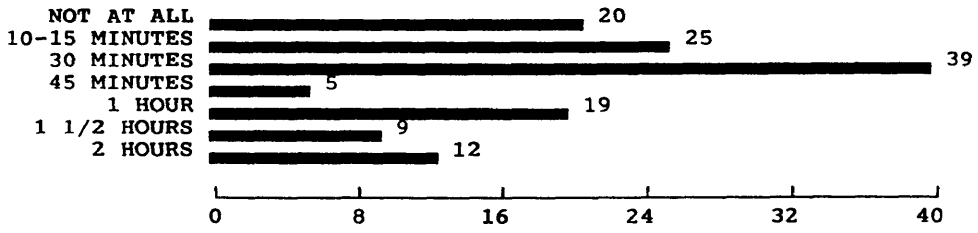
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
WEEKLY	2	8	6.2	6.2	6.2
1-2 TIMES PER MONTH	3	31	24.0	24.0	30.2
3-4 TIMES PER YEAR	4	28	21.7	21.7	51.9
1-2 TIMES PER YEAR	5	31	24.0	24.0	76.0
ONCE IN 3-4 YEARS	6	11	8.5	8.5	84.5
NEVER	7	20	15.5	15.5	100.0
	Total	129	100.0	100.0	



Mean	4.512	Std err	.131	Median	4.000

TIMESP TIME SPENT IN RELIGIOUS SERVICE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NOT AT ALL	1	20	15.5	15.5	15.5
10-15 MINUTES	2	25	19.4	19.4	34.9
30 MINUTES	3	39	30.2	30.2	65.1
45 MINUTES	4	5	3.9	3.9	69.0
1 HOUR	5	19	14.7	14.7	83.7
1 1/2 HOURS	6	9	7.0	7.0	90.7
2 HOURS	7	12	9.3	9.3	100.0
	Total	129	100.0	100.0	

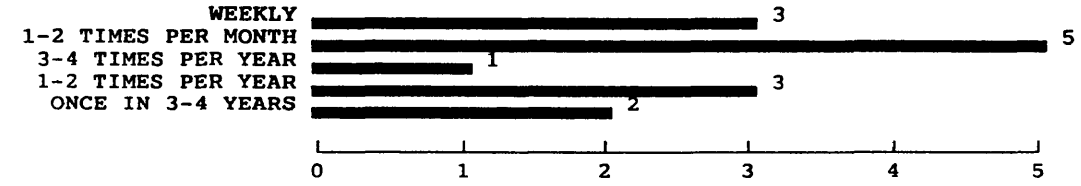


Mean	3.411	Std err	.163	Median	3.000
Mode	3.000	Std dev	1.848	Variance	3.416
Kurtosis	-.761	S E Kurt	.423	Skewness	.547
S E Skew	.213	Range	6.000	Minimum	1.000
Maximum	7.000	Sum	440.000		

Valid cases	129	Missing cases	0

CHURCHAT CHURCH ATTENDANCE

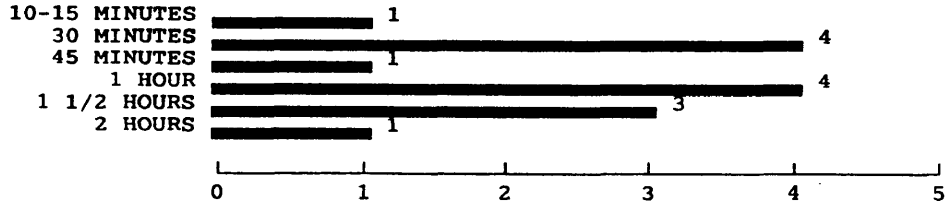
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
WEEKLY	2	3	21.4	21.4	21.4
1-2 TIMES PER MONTH	3	5	35.7	35.7	57.1
3-4 TIMES PER YEAR	4	1	7.1	7.1	64.3
1-2 TIMES PER YEAR	5	3	21.4	21.4	85.7
ONCE IN 3-4 YEARS	6	2	14.3	14.3	100.0
	Total	14	100.0	100.0	



Mean	3.714	Std err	.384	Median	3.000
Mode	3.000	Std dev	1.437	Variance	2.066
Kurtosis	-1.260	S E Kurt	1.154	Skewness	.403
S E Skew	.597	Range	4.000	Minimum	2.000

TIMESP TIME SPENT IN RELIGIOUS SERVICE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
10-15 MINUTES	2	1	7.1	7.1	7.1
30 MINUTES	3	4	28.6	28.6	35.7
45 MINUTES	4	1	7.1	7.1	42.9
1 HOUR	5	4	28.6	28.6	71.4
1 1/2 HOURS	6	3	21.4	21.4	92.9
2 HOURS	7	1	7.1	7.1	100.0
	Total	14	100.0	100.0	



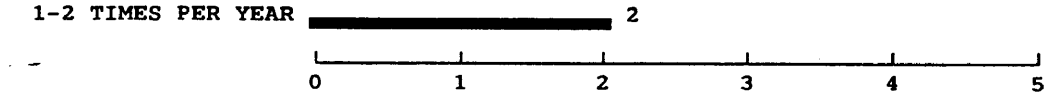
Mean	4.500	Std err	.403	Median	5.000
Mode	3.000	Std dev	1.506	Variance	2.269
Kurtosis	-1.135	S E Kurt	1.154	Skewness	-.079
S E Skew	.597	Range	5.000	Minimum	2.000
Maximum	7.000	Sum	63.000		

* Multiple modes exist. The smallest value is shown.

Valid cases 14 Missing cases 0

CHURCHAT CHURCH ATTENDANCE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
1-2 TIMES PER YEAR	5	2	100.0	100.0	100.0
	Total	2	100.0	100.0	

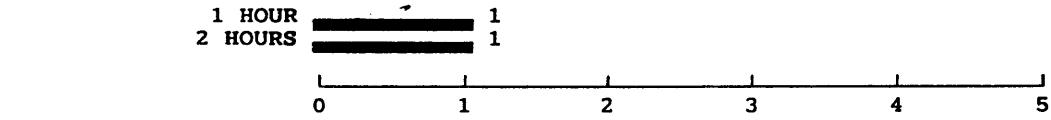


Mean	5.000	Std err	.000	Median	5.000
Mode	5.000	Std dev	.000	Variance	.000
Range	.000	Minimum	5.000	Maximum	5.000
Sum	10.000				

Valid cases 2 Missing cases 0

TIMESP TIME SPENT IN RELIGIOUS SERVICE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
1 HOUR	5	1	50.0	50.0	50.0
2 HOURS	7	1	50.0	50.0	100.0
	Total	2	100.0	100.0	



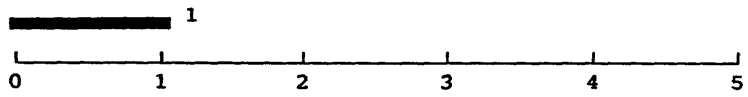
Mean	6.000	Std err	1.000	Median	6.000
Mode	5.000	Std dev	1.414	Variance	2.000
Range	2.000	Minimum	5.000	Maximum	7.000
Sum	12.000				

* Multiple modes exist. The smallest value is shown.

Valid cases 2 Missing cases 0

CHURCHAT CHURCH ATTENDANCE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
WEEKLY	2	1	100.0	100.0	100.0
	Total	1	100.0	100.0	

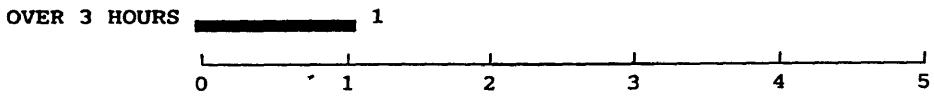


Mean	2.000	Median	2.000	Mode	2.000
Range	.000	Minimum	2.000	Maximum	2.000
Sum	2.000				

Valid cases 1 Missing cases 0

TIMESP TIME SPENT IN RELIGIOUS SERVICE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
OVER 3 HOURS	8	1	100.0	100.0	100.0
	Total	1	100.0	100.0	

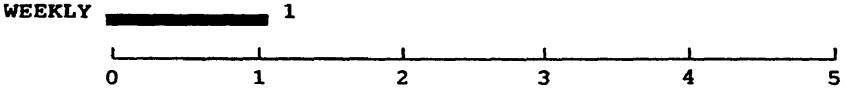


Mean	8.000	Median	8.000	Mode	8.000
Range	.000	Minimum	8.000	Maximum	8.000
Sum	8.000				

Valid cases 1 Missing cases 0

CHURCHAT CHURCH ATTENDANCE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
WEEKLY	2	1	100.0	100.0	100.0
	Total	1	100.0	100.0	

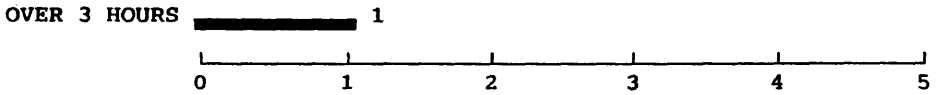


Mean	2.000	Median	2.000	Mode	2.000
Range	.000	Minimum	2.000	Maximum	2.000
Sum	2.000				

Valid cases 1 Missing cases 0

TIMESP TIME SPENT IN RELIGIOUS SERVICE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
OVER 3 HOURS	8	1	100.0	100.0	100.0
	Total	1	100.0	100.0	



Mean	8.000	Median	8.000	Mode	8.000
Range	.000	Minimum	8.000	Maximum	8.000
Sum	8.000				

Valid cases 1 Missing cases 0

CHURCHAT CHURCH ATTENDANCE by TIMESP TIME SPENT IN RELIGIOUS SERVICE
Controlling for..
RELIGION RELIGIOUS DENOMINATION Value = 3 ORTHODOX

TIMESP

CHURCHAT	Count / Row Pct / Col Pct / Tot Pct	NOT AT ALL 1	10-15 MINUTES 2	30 MINUTES 3	45 MINUTES 4	1 HOUR 5	Row Total
WEEKLY 2			2 25.0 8.0 1.6	3 37.5 7.7 2.3	1 12.5 20.0 .8		8 6.2
1-2 TIMES PER MO 3			9 29.0 36.0 7.0	8 25.8 20.5 6.2	2 6.5 40.0 1.6	3 9.7 15.8 2.3	31 24.0
3-4 TIMES PER YE 4			4 14.3 16.0 3.1	10 35.7 25.6 7.8	2 7.1 40.0 1.6	8 28.6 42.1 6.2	28 21.7
1-2 TIMES PER YE 5			6 19.4 24.0 4.7	13 41.9 33.3 10.1		8 25.8 42.1 6.2	31 24.0
ONCE IN 3-4 YEAR 6			4 36.4 16.0 3.1	5 45.5 12.8 3.9			11 8.5
NEVER 7		20 100.0 100.0 15.5					20 15.5
(Continued)	Column Total	20 15.5	25 19.4	39 30.2	5 3.9	19 14.7	129 100.0

CHURCHAT CHURCH ATTENDANCE by TIMESP TIME SPENT IN RELIGIOUS SERVICE
Controlling for..
RELIGION RELIGIOUS DENOMINATION Value = 3 ORTHODOX

TIMESP Page 2 of 2

CHURCHAT	Count / Row Pct / Col Pct / Tot Pct	1 1/2 HOURS	2 HOURS	Row Total
	2		2	8
WEEKLY			25.0	6.2
			16.7	
			1.6	
	3	5	4	31
1-2 TIMES PER MO		16.1	12.9	24.0
		55.6	33.3	
		3.9	3.1	
	4		4	28
3-4 TIMES PER YE			14.3	21.7
			33.3	
			3.1	
	5	3	1	31
1-2 TIMES PER YE		9.7	3.2	24.0
		33.3	8.3	
		2.3	.8	
	6	1	1	11
ONCE IN 3-4 YEAR		9.1	9.1	8.5
		11.1	8.3	
		.8	.8	
	7			20
NEVER				15.5
	Column Total	9 7.0	12 9.3	129 100.0

Chi-Square	Value	DF	Significance
Pearson	157.58214	30	.00000
Likelihood Ratio	142.70751	30	.00000
Mantel-Haenszel test for linear association	27.06977	1	.00000

Minimum Expected Frequency - .310
Cells with Expected Frequency < 5 - 35 OF 42 (83.3%)

CHURCHAT CHURCH ATTENDANCE by TIMESP TIME SPENT IN RELIGIOUS SERVICE
Controlling for..
RELIGION RELIGIOUS DENOMINATION Value = 1 CATHOLIC

TIMESP

CHURCHAT	Count / Row Pct / Col Pct / Tot Pct	10-15 MINUTES 2	30 MINUTES 3	45 MINUTES 4	1 HOUR 5	1 1/2 HOURS 6	Row Total
WEEKLY	2				1 33.3 25.0 7.1	1 33.3 33.3 7.1	3 21.4
1-2 TIMES PER MO	3		3 60.0 75.0 21.4	1 20.0 100.0 7.1	1 20.0 25.0 7.1		5 35.7
3-4 TIMES PER YE	4					1 100.0 33.3 7.1	1 7.1
1-2 TIMES PER YE	5	1 33.3 100.0 7.1	1 33.3 25.0 7.1			1 33.3 33.3 7.1	3 21.4
ONCE IN 3-4 YEAR	6				2 100.0 50.0 14.3		2 14.3
(Continued)	Column Total	1 7.1	4 28.6	1 7.1	4 28.6	3 21.4	14 100.0

CHURCHAT CHURCH ATTENDANCE by TIMESP TIME SPENT IN RELIGIOUS SERVICE
Controlling for..
RELIGION RELIGIOUS DENOMINATION Value = 1 CATHOLIC

TIMESP Page 2 of 2

CHURCHAT	Count / Row Pct / Col Pct / Tot Pct	2 HOURS 7	Row Total
2 WEEKLY		1 33.3 100.0 7.1	3 21.4
3 1-2 TIMES PER MO			5 35.7
4 3-4 TIMES PER YE			1 7.1
5 1-2 TIMES PER YE			3 21.4
6 ONCE IN 3-4 YEAR			2 14.3
Column Total		1 7.1	14 100.0

Chi-Square	Value	DF	Significance
Pearson	22.24444	20	.32740
Likelihood Ratio	22.43517	20	.31737
Mantel-Haenszel test for linear association	.41021	1	.52187

Minimum Expected Frequency - .071
Cells with Expected Frequency < 5 - 30 OF 30 (100.0%)

CHURCHAT CHURCH ATTENDANCE by TIMESP TIME SPENT IN RELIGIOUS SERVICE
Controlling for..
RELIGION RELIGIOUS DENOMINATION Value = 4 JEWISH

CHURCHAT	TIMESP 1 HOUR	TIMESP 2 HOURS	Row Total
5	1	1	2
1-2 TIMES PER YE	50.0	50.0	100.0
	100.0	100.0	
	50.0	50.0	
Column Total	1 50.0	1 50.0	2 100.0

CHURCHAT CHURCH ATTENDANCE by TIMESP TIME SPENT IN RELIGIOUS SERVICE
Controlling for..
RELIGION RELIGIOUS DENOMINATION Value = 5 PROTESTANT

CHURCHAT	TIMESP OVER 3 HOURS	Row Total
2	1	1
WEEKLY	100.0	100.0
	100.0	
	100.0	
Column Total	1 100.0	1 100.0

CHURCHAT CHURCH ATTENDANCE by TIMESP TIME SPENT IN RELIGIOUS SERVICE
Controlling for..
RELIGION RELIGIOUS DENOMINATION Value = 6 OTHER

CHURCHAT	TIMESP OVER 3 HOURS	Row Total
2	1	1
WEEKLY	100.0	100.0
	100.0	
	100.0	
Column Total	1 100.0	1 100.0

WARNING 10307
Statistics cannot be computed when the number of non-empty rows or columns is one.

Number of Missing Observations: 0

CHURCHAT CHURCH ATTENDANCE by RELIGION RELIGIOUS DENOMINATION

RELIGION Page 1 of 1

CHURCHAT	Count / Row Pct / Col Pct / Tot Pct	CATHOLIC 1	ORTHODOX 3	Row Total
WEEKLY	2	2 50.0 50.0 8.7	2 50.0 10.5 8.7	4 17.4
1-2 TIMES PER MO	3	1 16.7 25.0 4.3	5 83.3 26.3 21.7	6 26.1
3-4 TIMES PER YE	4	1 25.0 25.0 4.3	3 75.0 15.8 13.0	4 17.4
1-2 TIMES PER YE	5		5 100.0 26.3 21.7	5 21.7
ONCE IN 3-4 YEAR	6		2 100.0 10.5 8.7	2 8.7
NEVER	7		2 100.0 10.5 8.7	2 8.7
	Column Total	4 17.4	19 82.6	23 100.0

Chi-Square	Value	DF	Significance
Pearson	5.01864	5	.41361
Likelihood Ratio	5.80311	5	.32585
Mantel-Haenszel test for linear association	3.36555	1	.06657

Minimum Expected Frequency - .348
Cells with Expected Frequency < 5 - 12 OF 12 (100.0%)

Number of Missing Observations: 0

CHURCHAT CHURCH ATTENDANCE by RELIGION RELIGIOUS DENOMINATION

RELIGION Page 1 of 1

CHURCHAT	CATHOLIC 1	ORTHODOX 3	OTHER 6	Row Total
2 WEEKLY			1 100.0 100.0 3.3	1 3.3
3 1-2 TIMES PER MO		7 100.0 25.0 23.3		7 23.3
4 3-4 TIMES PER YE		7 100.0 25.0 23.3		7 23.3
5 1-2 TIMES PER YE		7 100.0 25.0 23.3		7 23.3
6 ONCE IN 3-4 YEAR	1 50.0 100.0 3.3	1 50.0 3.6 3.3		2 6.7
7 NEVER		6 100.0 21.4 20.0		6 20.0
Column Total	1 3.3	28 93.3	1 3.3	30 100.0

Chi-Square	Value	DF	Significance
Pearson	44.46428	10	.00000
Likelihood Ratio	14.69580	10	.14355
Mantel-Haenszel test for linear association	3.81697	1	.05074

Minimum Expected Frequency - .033
Cells with Expected Frequency < 5 - 14 OF 18 (77.8%)

Number of Missing Observations: 0

CHURCHAT CHURCH ATTENDANCE by RELIGION RELIGIOUS DENOMINATION

CHURCHAT	Count / Row Pct / Col Pct / Tot Pct	RELIGION 1 CATHOLIC	3 ORTHODOX	4 JEWISH	5 PROTESTANT	Row Total
WEEKLY	2		5 83.3 7.9 7.0		1 16.7 100.0 1.4	6 8.5
1-2 TIMES PER MO	3	3 15.8 60.0 4.2	16 84.2 25.4 22.5			19 26.8
3-4 TIMES PER YE	4		14 100.0 22.2 19.7			14 19.7
1-2 TIMES PER YE	5	2 11.8 40.0 2.8	13 76.5 20.6 18.3	2 11.8 100.0 2.8		17 23.9
ONCE IN 3-4 YEAR	6		7 100.0 11.1 9.9			7 9.9
NEVER	7		8 100.0 12.7 11.3			8 11.3
	Column Total	5 7.0	63 88.7	2 2.8	1 1.4	71 100.0

Chi-Square	Value	DF	Significance
Pearson	23.02025	15	.08371
Likelihood Ratio	18.32230	15	.24610
Mantel-Haenszel test for linear association	.07436	1	.78509

Minimum Expected Frequency - .085
Cells with Expected Frequency < 5 - 18 OF 24 (75.0%)

Number of Missing Observations: 0

CHURCHAT CHURCH ATTENDANCE by RELIGION RELIGIOUS DENOMINATION

RELIGION Page 1 of 1

CHURCHAT	Count / Row Pct / Col Pct / Tot Pct	CATHOLIC 1	ORTHODOX 3	Row Total
WEEKLY	2	1 100.0 25.0 4.8		1 4.8
1-2 TIMES PER MO	3	1 25.0 25.0 4.8	3 75.0 17.6 14.3	4 19.0
3-4 TIMES PER YE	4		4 100.0 23.5 19.0	4 19.0
1-2 TIMES PER YE	5	1 16.7 25.0 4.8	5 83.3 29.4 23.8	6 28.6
ONCE IN 3-4 YEAR	6	1 50.0 25.0 4.8	1 50.0 5.9 4.8	2 9.5
NEVER	7		4 100.0 23.5 19.0	4 19.0
	Column Total	4 19.0	17 81.0	21 100.0

Chi-Square	Value	DF	Significance
Pearson	7.48897	5	.18674
Likelihood Ratio	7.77233	5	.16924
Mantel-Haenszel test for linear association	1.25229	1	.26311

Minimum Expected Frequency - .190
Cells with Expected Frequency < 5 - 12 OF 12 (100.0%)

Number of Missing Observations: 0

CHURCHAT CHURCH ATTENDANCE by RELIGION RELIGIOUS DENOMINATION

RELIGION Page 1 of 1

CHURCHAT	Count / Row Pct / Col Pct / Tot Pct	ORTHODOX 3	Row Total
WEEKLY	2	1 100.0 50.0 50.0	1 50.0
1-2 TIMES PER YE	5	1 100.0 50.0 50.0	1 50.0
	Column Total	2 100.0	2 100.0

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Number of Missing Observations: 0