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INNOVATION ADOPTION IN INDUSTRIAL SALES ORGANIZATIONS: A FIELD
STUDY OF THE POST-ADOPTION PHASE IN THE CASE OF TELEMARKETING

by

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Submitted in partial fulfilment
of the requirements for the degree of
Doctor of Philosophy

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ABSTRACT

Telemarketing is an increasingly popular innovation in industrial salesforces in North America. In spite of rising popularity, the incidence of problems severe enough to cause discontinuance has been estimated at about 40%. The purpose of this study was to formulate and test a model of organizational factors leading to successful adoption of the telemarketing innovation.

Data to test the model were collected by interviewing two key informants in each of 110 industrial salesforces that had adopted telemarketing in the recent past. Structural equation modeling as implemented by LISREL was used to test the fit of the model to the data and to test the hypotheses developed from the model.

The overall model was a moderately good fit and support was found for many of the individual hypotheses in the model. To summarize, organization centralization was positively associated with success; formalization was negatively related to success. Resolution of implementation issues, sales rep support of telemarketing and core use of telemarketing were all positively associated with success. Division of labour, differentiation, and management support of telemarketing were positively related to resolution of implementation issues; sales rep support of innovation and

innovation compatibility were both positively related to sales rep support of telemarketing. Sales management support of innovation was positively related to management support of telemarketing.

Because the causal model was tested on cross-sectional data, the findings must be viewed as tentative at this point. However, preliminary conclusions were drawn for theory and marketing management. The study contributes to innovation theory by specifically modeling variables in the post-adoption phase of organization innovation adoption. Because the model is specifically formulated for the sales organization setting, it also contributes to sales management theory - especially the growing body of theory on marketing organization structure. The major theoretical contribution is the successful modeling of interrelationships among constructs that had been previously found to relate to innovation on individual bases.

Given the relatively high proportion of variance in adoption success explained by the model (.44), useful conclusions and implications for marketing managers were also drawn. Many variables identified as important in achieving success can be controlled by managers to increase the likelihood of success in the adoption of the innovation. In conclusion, the model provides a good start for needed future work on post-innovation adoption in organizations.

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CHAPTER 1 - INTRODUCTION TO THE RESEARCH

The Research Problem

In recent years, cost pressures and other changes in
the economic and social environment have hastened the
introduction of salesforce practice innovations such as key
account or national account management, team selling,
telemarketing, and computer-to-computer selling (Huguet,
1984; Shapiro and Wyman, 1981). Of these innovations,
telemarketing in particular, is enjoying increasing
acceptance by industrial marketers in both the United States
and Canada (Personal Interviews With Telecom Canada
Management, 1982; Roman and Donath, 1983).

In spite of rising popularity, the incidence of
problems severe enough to cause discontinuance in industrial
telemarketing applications has been informally estimated at
about 40% by a major Canadian marketer of telemarketing.
(Personal Interviews With Telecom Management 1982). This
poses a significant managerial problem for the increasing
numbers of companies attempting to improve sales
productivity through adopting this innovation. With the
current high cost of industrial personal selling, it is
likely that the adoption of this sales innovation will
become even more attractive to industrial salesforces. An
understanding of the factors associated with success and

1

failure in the implementation of this innovation is taking on greater importance.

A logical first step in understanding adoption success and failure is to search for writings on successful adoption of sales or marketing practice innovations - innovations that alter the way in which sales or marketing tasks are done. Although several authors have recognized the importance of these innovations and have discussed the need for appropriate research (Bellizzi and Murdock, 1981; Shapiro, 1978), marketing researchers have paid little attention to studying such innovations. As a result, sales management and personal selling theory provide almost no guidelines for managers adopting any of these salesforce practice innovations - telemarketing in particular.

An examination of the innovation-adoption literature did not supply the necessary answers either. Although there has been a significant amount of research on innovation, it has generally not focussed on organization adoption behaviour nor on post-adoption success of an innovation. Yet this is precisely the research which appears to be most useful to management in improving telemarketing success.

Purpose

In response to the problem cited above, the purpose of
this research is to study organizational factors associated
with success in adopting salesforce practice innovations.
The unit of analysis is the salesforce organization that has
recently adopted telemarketing and is in the implementation
stage of the innovation-adoption process. Specifically,
this thesis will (a) specify a model of organizational
factors related to success in adopting telemarketing, and
(b) empirically test hypotheses developed from this model
and the overall fit of the model to the data.

Before proceeding, it is essential to position the
purpose of this research in the overall picture of
organization innovation-adoption. An illustration might be
helpful:

Company Introducing   Sales Organization   Customers
the Innovation   Adopting the Innovation

PUSH $\longrightarrow$ [　　　] $\longrightarrow$ PULL
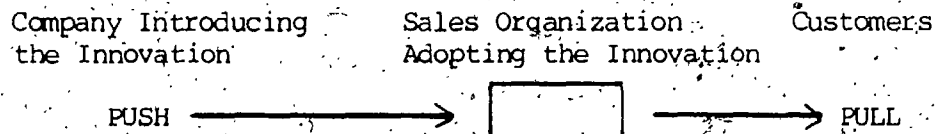
In the telemarketing case, the innovation has been
developed, and introduced to the market by companies who
face the challenges of marketing this innovation to
industrial sales organizations. These marketing activities
can be seen as pushing the innovation and encouraging
telemarketing adoption in the target market. The adopting

company has to recognize that its use of the innovation will alter its interactions with customers, so in effect, the customer also has to adopt the innovation. The purpose of this research as outlined above, is limited to studying organizational variables associated with successful telemarketing adoption in the adopting sales organization.

Contribution of the Proposed Research to Theory

A major aim of this research is to use innovation-adoption theory as a basis for building sales management theory. To do this, the research is designed to address the gaps in innovation theory noted above - (a) a lack of study of organizations adopting innovations and (b) a lack of research on post-adoption behaviour, By briefly sketching out the characteristics of previous innovation research these two needs for study should become clear.

Need for Study of Organizations

It is apparent that innovation research and theory has a long history (with roots in rural sociology - notably, the hybrid seed corn study of Ryan and Gross in 1943) and spans several disciplines. The primary thrusts in marketing innovation research have emphasized (a) diffusion of consumer products, (b) new product adoption by individual consumers, and (c) the early stages of the consumer adoption process (Bearden and Shimp, 1982; Kimberly, 1981; Midgley,

1976; Olshavsky, 1980; Rogers, 1962; 1976; Rogers and
Shoemaker, 1971; Wilton and Pessemier, 1981). There has
been some attention, (although surprisingly little by
comparison,) paid to industrial innovation. (Kennedy, 1983;
Martilla, 1971; O'Neal et.al., 1973; Ozanne and Churchill,
1971; Reynolds, 1971; Sayles, 1974; Zaltman et.al., 1973).

> Research studies attempting to understand the process
> of new product adoption have been substantial in
> areas such as rural sociology and the marketing of
> consumer goods.... However, industrial products have
> received only limited attention (Peters and
> Venkatesan, 1973, 312).

A somewhat related branch of innovation research has
examined the problem of organizing to promote creative
behaviour in organizations so the organization can
successfully offer innovative products to the marketplace
(Cooper, 1979a; 1979b; Crawford, 1977; Fast, 1978; Hlavacek
and Thompson, 1973; Normann, 1971; Tushman, 1977; Utterback,
1971). Even with this recent interest in the process of
technological diffusion (Cooper, 1979; Czepiel, 1975) and
the characteristics of innovative organizations (Fast, 1978;
Tushman, 1977), present knowledge and understanding of the
organization innovation adoption process remains in a fairly
undeveloped state. Two recent critiques of the field have
deemed the research results to date to be far from
conclusive (Bigoness and Perreault, 1981; Downs and Mohr,
1976).

Need for Study on Post-Adoption Behaviour

Almost no empirical research has focused on the implementation stage (or confirmation stage) of organization innovation adoption even though most models of innovation adoption consist of 3 stages, (a) initiation, (b) adoption, and (c) implementation. Paralleling developments in consumer adoption research, the dependent variable in existing research is almost always either innovativeness or adoption as opposed to implementation or adoption success (Cohn, 1980; Czepiel, 1975; Ozanne and Churchill, 1971; Martilla, 1971; Reynolds, 1971; Peters and Venkatesan, 1975; O'Neal et.al., 1973; Robertson and Wind, 1980). As stated by Kimberly (1981; 90):

> There have been remarkably few attempts to study post-adoption behaviour.... Most studies have sought to predict adoption and have ignored what happens after adoption.

He added later (p.91):

> Because research on implementation and utilization of innovations has consisted primarily of case studies, generalizations should be made with caution.

Numerous scholars have noted this omission for the past 10 years and have called for appropriate research to mend the gap (Beyer and Trice, 1978; Kimberly, 1979; Pierce and Delbecq, 1977; Rogers and Shoemaker, 1971; Yin, 1979; Zaltman et.al., 1973). However, surprisingly little

empirical work has been done on the topic of organization implementation of innovations or even on the more general topic of organization change (Beyer and Trice, 1978; Kimberly, 1981; Yin, 1979). As Beyer and Trice (1978: 8) have stated:

> The processes by which policy innovations and changes become operational has received less empirical attention than commonly is asserted in much of the relevant literature.... Much of the literature they cite is opinion and impressionistic rather than data-based.

By studying salesforce organizations in the implementation stage, this research is attempting to address these theoretical issues. Two secondary contributions are: (a) the study of innovation adoption in a business setting and (b) the study of a practice innovation as opposed to a product. Several advantages are associated with a business research context. First, results prescribing effective practices might provide direct practical benefit. Second, past research has been characterized by limited study sites — most often hospitals and schools (Aiken et.al., 1980). Generalizations to business organizations must therefore be made cautiously. An important advantage in studying this particular innovation is that it is a practice innovation as opposed to a product innovation and few studies have dealt with practice innovations (Zmud, 1982).

Contribution of the Proposed Research to Management

Knowledge of the factors associated with success in adopting telemarketing as an innovation should enable managers to make better decisions both in marketing and adopting telemarketing.

First, in order to promote diffusion, marketers of telemarketing and other industrial services will be able to use these results to target their marketing efforts more effectively towards firms that exhibit characteristics associated with successful adoption. Perhaps more importantly, marketers of innovative services could utilize information about how organizations achieve success in planning their marketing strategy. For example, a high technology company interested in marketing a computer-to-computer industrial selling system could plan its strategy based on factors likely to enhance success in the target client companies.

Second, once an adoption decision has been made, managers in the adopting organization could utilize these findings in their attempts to implement the innovation successfully. Controllable variables identified as important could be manipulated to achieve greater success, and variables seen as uncontrollable could be noted and attempts made to either offset or enhance their effects in the implementation phase.

Because telemarketing appears to be a significant
salesforce innovation in North America, generalizing
findings only to this group is interesting in its own right
(Coppett and Vorhees, 1983; Roman and Donath, 1983).
However, it is likely that the factors identified in this
study could also be generalized to other innovations of the
same type as telemarketing. On the basis of several
typologies of innovation in the literature, telemarketing
will be shown to be an evolutionary, technological process
or practice innovation. Examples of other evolutionary
technological process innovations might include the use of
portable computers by field sales reps to develop individual
sales strategies and sales presentations and the use of
computer-to-computer industrial selling systems. It is
difficult to assess the extent to which the results will be
generalizable outside the realm of this type of innovation
or outside industrial companies.

Definitions and Conceptual Frameworks

Telemarketing - Definition Problems

As is the case for many new phenomena, there is
considerable uncertainty among academics and practitioners
about what is meant by the term telemarketing. As well,

> Because of its flexibility and the variety of
> marketing situations in which telemarketing can
> be employed, it is difficult to develop a terse
> yet complete definition (Coppetts and Vorhees,
> 1983: 80).

For this research, telemarketing is an organized, strategic
approach to using the telephone (and any supporting
technologies) to accomplish various types of selling tasks.
Two features of this definition deserve mention. First,
strategic indicates that the sales or marketing organization
has seriously considered how telemarketing should fit into
the total sales program and marketing philosophy as opposed
to haphazardly utilizing the phone for selling on an
occasional basis. A conscious strategic decision is made
about the role of telemarketing in relation to the other
elements of the sales and marketing mix in the overall
marketing and sales plan. Second, 'to accomplish sales
tasks' implies a proactive role by the salesforce in
selling, as opposed to a passive order desk type of
operation.

As noted above by Coppetts and Vorhees (1983), a wide

range in degree of use and in number of applications is possible. Perhaps this can best be viewed on a continuum with large formal telemarketing centres at one extreme and very small, less formal telemarketing systems at the other. The formal centres are characterized by a fairly large number of reps who work full-time in a formal centre which is dedicated to telemarketing. In all likelihood, these reps would make calls to generate and qualify sales leads and would probably completely manage a number of assigned accounts over the telephone. The most informal systems are likely to have fewer reps, perhaps only working part-time on telemarketing activities. They may or may not have dedicated facilities. These systems would still be considered telemarketing if there had been a conscious company decision about how telemarketing would be used in the selling and marketing programs and proactive selling tasks were being done. Obviously there are many variants in between these extremes.

The majority of consultant reports refer to various forms of the formal centre - very few have discussed the informal systems (Fisher, P., 1981; Webster, 1980). On the other hand, Telecom Canada (the primary marketer of telemarketing in Canada) has tended to see the more informal systems as the norm in Canadian industry. Telecom has identified four central telemarketing applications:

(1) order processing (simply processing orders),

(2) customer service (handling customer questions or complaints),

(3) sales support (generating and qualifying sales leads), and

(4) account management (carrying out the entire selling process and subsequent management of accounts).

Order processing is considered the least complex of all applications, account management the most complex with the others representing increasing levels of complexity.

It is probably more useful to consider each of these applications as relatively distinct types of innovations. This research is limited to telemarketing sales support and account management innovations because these practices conform to the definition used in this thesis - they both involve at least some active personal selling functions being performed by the salesforce via telemarketing. In sales support, sales leads may be generated, qualified, and accounts serviced via telemarketing. In account management applications, the entire personal selling process and management of the account (most often marginal accounts) is handled via telemarketing.

Because the telephone has been a tool in business for

a very long time, it is worth thinking about whether
telemarketing can really be considered an innovation. A
short discussion about innovation definitions and
classifications will help resolve this issue.

Innovation - Definition Problems

The word "innovation" has been used and is used widely
and ambiguously in a variety of different meanings. For
example, the terms innovation, change, invention, and
adaptation are often used interchangeably. Most often
however, innovation tends to be used in one of 3 ways: (a)
as the process of bringing inventions into use (Pierce and
Delbecq, 1977), (b) as the actual idea, practice, or product
which is new (Rogers and Shoemaker, 1971; Zaltman et. al.,
1973), and (c) the event of introducing into a situation,
means or ends that are new to that situation (Evan and
Black, 1967; Mohr, 1969). For this research, the Rogers and
Shoemaker, Zaltman et.al. conceptualization has been
adopted and innovation is conceived as an idea, practice or
product which is new.

An obvious point for debate is the specification of
appropriate criteria to use in identifying something as new.
Is an innovation something that is new to the individual or
organization as perceived by that unit (Rogers and
Shoemaker, 1971; Rogers, 1983; Zaltman et.al. 1973)? Is it
something new to the state of the art in the field where it

originated or does it have to be new relative to the
individual or to the organization environment (Pierce and
Delbecq, 1977)? In this research it seems useful to accept
Daft and Becker's (1978) method of defining innovation as
change which is new, relative to the organization's
environment. This definition distinguishes innovation from
the more generic concept of change defined as behaviour new
to the adopting organization. Using this distinction,
innovation is one subset of organizational change.
Telemarketing is still sufficiently new to industrial
business environments and industries to be considered an
innovation. Telecom has estimated that only about 4% of
companies in Canada are using telemarketing, while a recent
survey of U.S. business/industrial companies suggests that
up to 20% of U.S. industrial/business firms are using it
(Roman and Donath, 1983).

Typologies of Innovation

The foregoing discussion on definitions illustrates
the considerable debate about basic conceptual issues in the
field of innovation. In a recent analysis of such issues,
Downs and Mohr (1976) reject the notion that a unitary
theory of innovation exists and postulate the existence of
distinct types of innovations whose adoption can best be
explained by a number of correspondingly distinct theories.
Researchers appear to be slowly implementing this idea as

typologies of innovations are beginning to emerge. For example, Zaltman et.al., (1973) suggest three innovation types: (1) Programmed and Nonprogrammed (depending upon the degree of anticipation or how much scheduling the individual or organization has done in advance); (2) Instrumental and Ultimate (depending on whether the innovation is an end in itself or instrumental in achieving other ends); and (3) Routine and Innovative (depending upon the radicalness or novelty of the innovation).

Similar to Zaltman's concept of the Routine/Innovative aspect of innovation, Mensch (1983) has developed a useful typology where one dimension of innovation is radical versus improvement-evolutionary. Radical innovations are extreme departures from the past. Improvement-evolutionary innovations have evolved from previous products or practices. It is probably most helpful to classify telemarketing as an improvement or evolutionary innovation rather than radical because it has evolved from basic telephone order taking practices of the past.

Following Daft (1978), who proposed a typology of technical versus administrative innovations, Kimberly and Evanisko (1981) distinguish between technological (production process) and administrative (having to do with administrative functions) innovations in their empirical study of hospital innovations. Zmud (1982) makes the same

kind of distinction by suggesting that technical innovations serve primarily the interests of the technical core and administrative innovations serve the administrative core. The technical core is responsible for producing the products and services that justify the unit's existence; the administrative core is responsible for planning, controlling and coordinating unit functioning as well as linking the unit hierarchically with the remainder of the organization. A further useful distinction is made by separating product and process innovations (Zmud, 1982). Product innovations refer to the introduction of new products or services that shift or expand an organization's domain, while process innovations refer to the introduction of new methods, procedures or responsibilities within existing domains.

In this research, telemarketing is an evolutionary innovative process or practice. Because the telemarketing applications researched here result in a change in selling practices (the central task of salesforces), telemarketing is conceived as a technological or technical innovation rather than an administrative innovation.

Summary

This introductory chapter has outlined the purpose of the research and its intended contributions for management and marketing theory. The remaining chapters in the dissertation describe the study and its results. In Chapter

2, the researcher will outline several existing models of the innovation adoption process, then present the model formulated to guide the present research. The literature used to build the proposed model is reviewed and hypotheses developed from this model are presented. Chapter 3 outlines the research design and data collection procedures. Methods for operationalizing the theoretical constructs used in the hypotheses are also given in Chapter 3. In Chapter 4, data analysis procedures and results are presented. The initial research model is tested, evaluated, revised and the results of the statistical tests for each hypothesis are given. Finally, Chapter 5 contains some theoretical and managerial implications of the research as well as an assessment of the research strengths and weaknesses. Following from this assessment, some directions for future research work are also presented.

CHAPTER 2 - MODEL AND HYPOTHESES DEVELOPMENT

Having established that the purpose of the study is to
specify and test a model of organizational factors related
to success in adopting telemarketing, the next step was to
begin developing an appropriate model. This process was
initiated by studying several published models of the
innovation adoption process. This was done for two reasons.
First, the researcher wanted to gain insight into the state
of model development in the field - how much detail is
specified in each of the currently existing models? What
relationships have been proposed? What relationships have
been supported by research? Second, the researcher intended
to use one or more of these models as the basic building
block(s) for developing the model for this study. A number
of models were uncovered, but as will be shown, none was
detailed enough in suggesting relationships between selected
variables and success in adopting innovations. However,
these existing models provided an important overall picture
of the process of innovation adoption and served as the
basic framework from which the success model was developed.

The next step in model development was to identify key
variables that had not been assimilated into any existing
models of organization innovation adoption. These variables
were then incorporated into the basic framework to build the

more detailed model of variables related to success.

Reflecting the model development procedure, the purpose of this chapter is: (a) to review several of the major process models of innovation adoption, (b) to present the model developed for this study, and (c) to review the research supporting the inclusion of each of the constructs used in the model. This chapter is intended to provide an overview of the state of the theory and research development in organization innovation adoption. It also aims to provide the necessary background and support for the proposed causal model.

Existing Models of the Innovation Adoption Process

There is considerable consistency in existing models of the innovation process (Hage and Aiken, 1970; Rogers, 1983; Rogers and Shoemaker, 1971; Zaltman, Duncan and Holbek, 1973). An obvious commonality is that most contain between two and four stages. Typically, one or two preadoption phases are included in the model. In these stages, a problem is recognized, and attitudes about the innovation are formed. A decision on whether to adopt the innovation is made during the adoption stage. Following adoption, the innovation is implemented. Pierce and Delbecq (1977) use a three stage model (1) initiation (2) adoption and (3) implementation. This model is general enough to be considered typical of most models in the literature.

The basic components of models that have been most influential in innovation research will be sketched out below. These models were selected for review because of their prominence in the literature and their influence on research in the area. The models will be reviewed in chronological order (approximately) to provide a view of theory development over the past 10 to 15 years. Following these brief sketches, conclusions regarding the state of model development will be given and the framework (developed from these models) that will guide this research is given.

Hage and Aiken, 1970

Hage and Aiken have been very prolific in innovation research and have probably made their greatest contribution in researching organizational structure variables such as centralization, formalization, and complexity, in relation to innovation adoption (Hage and Aiken, 1967; Hage and Aiken, 1970; Hage and Dewar, 1973). (Organization centralization is the degree of participation of organization members in decision making. Formalization is the extent to which written rules have been developed to guide work procedures. Organizational complexity is the extent of diversity of subunits within an organization).

They propose a fairly simple four stage model. Evaluation is the first stage. In this phase, organization decision-makers identify performance gaps. In the second

stage, initiation, concern is with decision making and the
actual decision to adopt the innovation. Implementation is
the initial attempt to integrate the innovation into the
organization and during routinization the innovation is
retained and fully integrated into the organization. They
directed their research mainly toward examining organization
variables on rates of innovation adoption. The specific
research findings will be introduced in the hypotheses
development section below.

Zaltman, Duncan and Holbek, 1973

The model of the innovation process formulated by
Zaltman et.al., consists of two stages and five substages:

I. Initiation Stage

   1. Knowledge-awareness

   2. Attitude formulation

   3. Decision

II. Implementation Stage

   1. Initial implementation

   2. Continued-sustained implementation or discontinuance.

As the substages imply, during initiation, the
organization is made aware of the innovation, attitudes

about it are formed and a decision about whether to adopt is made. A performance gap recognition by members of the organization is considered to be an important impetus to innovation. During the initial implementation substage, the organization makes its first attempts to utilize the innovation. This is followed by continued implementation or discontinuance depending on success of the adoption.

It is striking to note the similarities between these two relatively early models of innovation. Zaltman's two substages in the implementation phase correspond to Hage and Aiken's implementation and routinization stages. As will be shown, the Zaltman model has keyed on relationships between organization structure and the adoption process. The Hage and Aiken research has also examined these relationships. However, because the work of Zaltman et.al., was particularly geared toward model development, their work offers more than a relatively simple outline of the innovation-adoption process. The authors advanced several research propositions about each stage of the process. Consistent with the observation made earlier in this thesis, Zaltman et.al. note that most diffusion researchers terminate research analysis at the decision stage of the process. Since the research propositions advanced by Zaltman et.al., are based on previous findings (and there are fewer findings about the implementation stage of the process), the author's propositions about the implementation

stage are less well developed than propositions regarding

the other stages of the innovation process. However, since

this study is primarily interested in post-adoption success,

the theory (limited though it may be) proposed by Zaltman

et. al. about the implementation stage is worth considering.

Overall the Zaltman et. al. propositions and the

theory suggest organizational characteristics which are

thought to facilitate both the initiation and implementation

stages of innovation adoption. Structural variable

propositions suggest that different structural forms (ways

of structuring the organization) may be most suited to each

of the two phases of the adoption process. For example,

lower organizational complexity is hypothesized to be

positively associated with implementation - high complexity

with initiation. Organizational complexity will be

discussed in detail later, but it is often defined as the

extent of diversity of subunits within an organization.

High formalization (extent to which a body of rules has been

developed to guide work procedures and processes) and

centralization (the extent to which decision-making is

concentrated in the organization) are thought to be

positively associated with implementation; but low

formalization and centralization are related positively with

initiation. The authors point out that handling resistance

to change is likely to be especially critical in achieving

success in the implementation stage. Handling this

resistance is hypothesized to be easier in highly formal, centralized organizations.

Rogers and Shoemaker, 1971

Even though the Rogers and Shoemaker book is now over a decade old, it continues to have considerable impact on innovation research and theory. Their paradigm differs from the Zaltman et.al. and the Hage and Aiken models by being specifically geared to the individual as opposed to the organization and by being specified in much more detail than either of the two models reviewed so far. A complete set of propositions associated with the model are presented. Research underlying each proposition is evaluated so the reader can see that many propositions have minimal support while others have massive research support.

There are four stages in the model. During the knowledge stage, the individual is exposed to the innovation's existence and gains some understanding of how it functions. At the persuasion stage, the individual forms a favorable or unfavorable attitude toward the innovation. A decision whether to adopt or reject is made, and at the confirmation stage, the individual seeks reinforcement for the decision he or she has made.

Because this model is essentially oriented to the individual, organziation variables are not emphasized. However, the knowledge and persuasion stages correspond to

the initiation stage of the two models discussed above.

Confirmation roughly corresponds to the implementation

stage. Rogers and Shoemaker suggest that an extra step is

necessary in the model if one wishes to apply it to

organizational settings. After the decision stage, a

communication stage is necessary where information about the

innovation is communicated to members of the organization.

Again Rogers and Shoemaker note the lack of research on the

confirmation stage.

Rogers, 1983

In a more recent edition of the Rogers and Shoemaker (1971)

book, Rogers proposes an innovation process model -specific

to organizations. This represents a significant advance .

from the earlier work where the process of innovation

adoption of individuals (with a few provisos) was assumed to

be appropriate for organizations. Following Zaltman

et.al.(1973), the Rogers model of the innovation process in

organizations consists of two stages and five substages:

I. Initiation

  1. Agenda-Setting

  2. Matching

II. Implementation

  3. Redefining/Restructuring

4. Clarifying

5. Routinizing

This model is a true process model where later stages are not usually undertaken until earlier stages have been settled. The prime activity during agenda-setting is recognition of needs and search for potential innovations to satisfy these needs. The fit between an innovation and an organization need is assessed at the matching stage. During redefining/restructuring, the innovation is incorporated into the organization. If it does not exactly fit the organization's situation, it may be reinvented to more closely accomodate the organization's needs and structure or the structure of the organization may be modified to fit the innovation. Clarifying involves more clearly defining the relationship between the organization and the innovation. Lastly, the innovation becomes an element in the organization's ongoing activities in the routinization stage.

Rogers concludes that research evidence suggests that these stages of the innovation decision process do exist. He lauds the trend to study the process of organization innovation through case study type approaches. These studies have been the basis on which the process models are built and have been the recent norm (Bernas, 1981; Frank and Hackman, 1975; Nelson and Yates, 1978; Yin, 1979).

Other Recent Models

Pierce and Delbecq (1977) use a three stage model:
(1) initiation (2) adoption and (c) implementation. Zmud
(1982) has conducted research using this model as a
framework. Kimberly's model (1981) is an interesting
departure because it emphasizes post-adoption stages of the
process - two of the three stages are post-adoption ones.
He poses a three stage model (1) adoption (2) utilization
(implementation) and (3) exnovation (removal of the
innovation from the organization). This model has not been
empirically tested. Yin (1979) also proposes three stages
(1) initiation and adoption (2) implementation and (3)
routinization (innovation becomes part of the routine
practice).

It is interesting to note the implied success and
failure inherent in these models. For instance, the
Kimberly model posits two post-adoption phases but the
exnovation stage is really a failure stage. On the other
hand, Yin also posits two post adoption phases, but
routinization implies success of the innovation to such an
extent that it becomes an integral part of organization
practice. A process model explicitly accommodating both
success and failure of the process would force attention to
variables that differentiate the two.

The Conceptual Framework To Guide The Proposed Research

Overall, the consistency between these models is a rather encouraging feature. All of the models are process models; all include at least one implementation oriented phase following the adoption decision. The Rogers and Shoemaker (1971) model is most different in that it specifies a confirmation stage as opposed to an implementation stage. Confirmation implies implementation but suggests more of a decision-making orientation – the decision-making unit is gaining experience with the innovation and deciding whether to carry on or discontinue. Implementation implies activity necessary to introduce and use the innovation in the organization. Rogers and Shoemaker (1971), Rogers (1983) and Zaltman et.al., (1973) specifically note that two outcomes of implementation are possible – continuance and discontinuance. The other models tend to emphasize either successful implementation and subsequent routinization or unsuccessful innovation and exnovation. It is apparent that there are considerable differences between models in the early stages of the process but these issues are of secondary importance for the study proposed here.

From this review of the key existing models of the innovation adoption process, it is apparent that there are different phases or stages in the process of innovation adoption. As well, the consistency between models suggests

that our knowledge of the time sequence of the stages in the
actual process is fairly good. It is time to move forward
from accumulating knowledge of the process to specifying
relationships at each stage of the process. For example,
research should examine the relationship between structural
variables at one stage - either initiation, adoption or
implementation. The argument that the greatest gain in
research is likely to come from researching relationships at
each stage of the adoption process may seem a truism, but it
represents a significant change in focus from much past
research where researchers referred generally to innovation
adoption without being explicit about what aspect of the
process was really being dealt with (Kimberly, 1981; Pierce
and Delbecq, 1977). In reviewing the research below, an
attempt has been made to determine and explicitly state
(when possible) the stage of the innovation process where
the research focussed.

An innovation adoption model was adapted from these
models (see Figure 2.1) to guide the proposed research. The
model is comprised of three primary stages in the tradition
of current models: (1) initiation, (2) adoption, and (3)
confirmation. However, an attempt has been made to explain
the post-adoption stage more fully than previous models and
to adapt the model to an organization setting. Even the
Rogers (1983) model (which is the most highly developed
organization innovation adoption model) simply outlines the

order of events during implementation. This approach of
posing a detailed model of innovation adoption specifically
geared to the organization is an essential step. "There was
a tendency until the 1970's simply to transfer to the study
of organizations the models and methods of innovativeness
originally developed for individuals, often without
carefully thinking through the ways in which the two levels
of systems were alike or unalike." (Rogers, 1983: 355).

PROBLEM → PERCEIVED → PROPOSAL → PERCEPTIONS → ADOPTION
IE.COST   NEED FOR   FOR   ABOUT   DECISION
OF   CHANGE IN   ADOPTION   TELEMARKETING
PERSONAL SALESFORCE   OF
SELLING   TELE-
                       MARKETING

AWARENESS OF
TELEMARKETING

OTHER
ALTERNATIVES

DECIDE
NO CHANGE

NO ← ADOPTION DECISION

YES → ORGANIZATION → SUCCESS
      IMPLEMENTATION

INITIATION | ADOPTION | CONFIRMATION
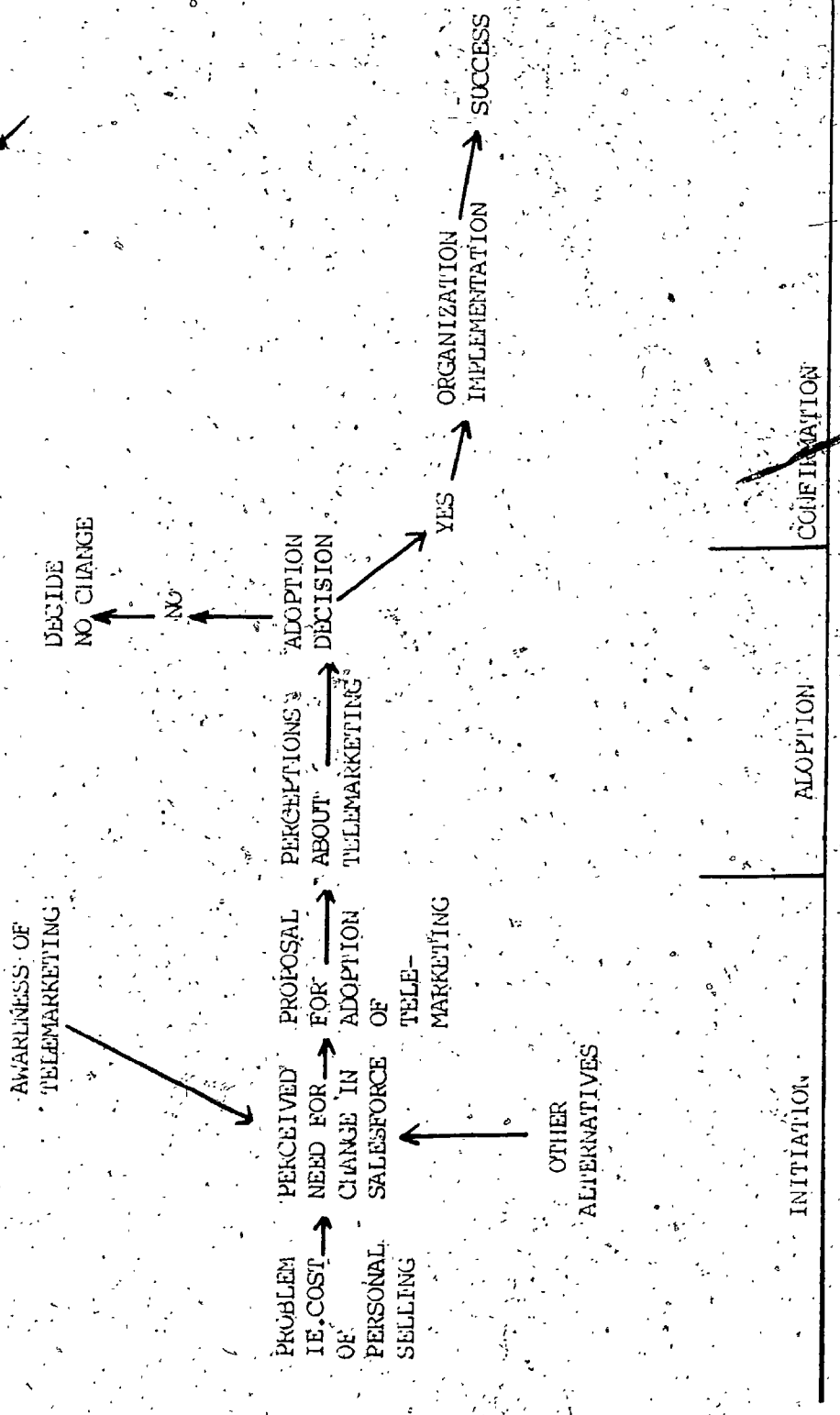
Figure 2.1 – The Salesforce Organization Telemarketing Adoption Process

The proposed adoption model posits that during initiation a perceived need for change can be triggered by a current problem (high selling costs) or an awareness of new alternatives previously unavailable, e.g., telemarketing. Both of these represent possible ways an organization could learn about an innovation. Organizations constantly scan environments and may happen across solutions - " Answers often precede questions" (March, 1981). Alternatively, an organizational problem could spark an active search for a solution. During initiation, perhaps only a small proportion of organization members are involved, but ultimately more than one or two individuals will need to become involved. A proposal for telemarketing adoption would be made to members of the organization who during adoption, formulate perceptions about telemarketing and make a decision about whether to adopt the innovation. The confirmation stage begins after the adoption decision. If a decision is made to adopt, the organization must implement the change. This implementation will lead to an output - some degree of success.

Figure 2.2 explains the confirmation stage by specifying a model of the variables hypothesized as affecting the organization's success in adopting the innovation. Figure 2.1 is intended to be a process model, delineating the process that sales organizations follow in adopting telemarketing. Success (or lack of it) is the

output of this process. Figure 2.2 attempts to model organizational factors that influence this success output in the confirmation stage. The model shown in Figure 2.2 was constructed using insights gained from (a) three short field investigations of companies who had adopted telemarketing (the three firms were purposively selected - one very successful, one experiencing medium success and one unsuccessful), and (b) a review of the innovation - adoption literature. From these preliminary investigations, the variables which appeared likely to affect adoption success could be grouped into three categories: (a) characteristics of the adopting unit (salesforce structure variables and sales management support), (b) how the process of implementation is handled (resolution of implementation issues), and (c) the innovation-organization match (compatibility of the innovation and use of the innovation).

SALESFORCE
CENTRALIZATION

SALESFORCE
FORMALIZATION

SALESFORCE
COMPLEXITY

MANAGEMENT SUPPORT
OF INNOVATION

MANAGEMENT SUPPORT   RESOLUTION OF   SUCCESS
OF TELEMARKETING   IMPLEMENTATION ISSUES

COMPATIBILITY OF
TELEMARKETING

SALES REP SUPPORT   SALES REP SUPPORT   CORE USE OF
OF INNOVATION   OF TELEMARKETING   TELEMARKETING
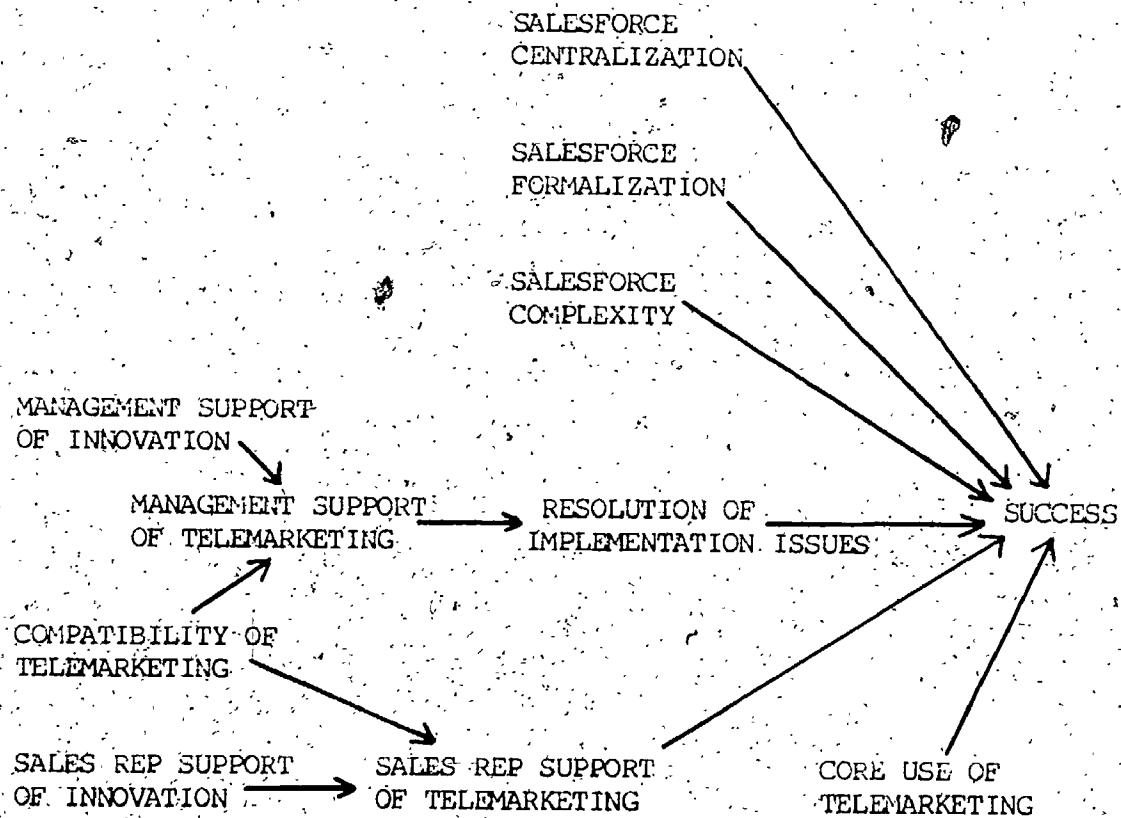
Figure 2.2.   The Confirmation Stage Explained: A Model of the Factors
              Related to Success in Adopting Telemarketing

Very briefly, the model posits that three salesforce
structure variables (centralization, formalization, and
complexity) influence success. Formalization and complexity
are hypothesized to positively affect success. The
direction of the effect of centralization is hypothesized to
be contingent upon the compatibility of telemarketing.
(This effect is discussed in detail in a later section).

Both compatibility (consistency of the innovation with
past practices) and management support for change are
hypothesized to be positively related to management support
of telemarketing. Compatibility and sales rep support for
change are thought to positively affect reps' support of
telemarketing. The greater the support for change, the more
positive the support for telemarketing; the greater the
compatibility of the innovation with past practices, the
more positive the support for the innovation. It may seem
contradictory to suggest that an innovation can be
compatible with previous experiences but it is likely that
for some organizations, some innovations may be fairly
consistent with the way things were done in the past.

In turn, management support of telemarketing is viewed
as affecting the resolution of implementation issues. The
greater the resolution of implementation issues, the greater
the success of telemarketing. Rep support of telemarketing
is viewed as having a direct positive effect on success.

Lastly, the extent to which telemarketing is used for core applications (some existing function or task that is central to the salesforce) of the salesforce is hypothesized as positively associated with telemarketing success.

This represents the first attempt that the researcher has seen to model paths of influence among variables leading to organization adoption success. Research on, and theory about each variable will be briefly reviewed and hypotheses developed in the section below.

Existing Research: Model and Hypotheses Development

Structure of the Salesforce: An Overview

When we look at the results of the several hundred studies of organizational innovativeness, the general picture is one of rather low correlations of each of the independent variables [organization structure variables]...with the innovativeness of organizations. The basic reason for these disappointing results is that each of the organizational structure variables is related to innovation in one direction during initiation, and in the opposite direction during implementation.... Thus we see how bringing the initiation and implementation subprocesses of the innovation process into our analysis helps explain the results of past research on correlates of organizational innovativeness (Rogers, 1983: 361).

In innovation research three structural variables are important in relation to innovation adoption — centralization, formalization, and complexity. As stated by Rogers, it is now thought that these variables can have various effects on the innovation process depending on the stage in the process. However, this is largely speculation

as most research attention has been paid to the initiation and adoption phases.

For example, Hage and Dewar (1973) studied 16 health and welfare organizations by interviewing department heads and a proportion of the staff. Of particular merit was the longitudinal aspect of the data collection (data were collected in 1964 and 1967). Predictions of differential rates of program innovation were made on the basis of 1964 data and tested on the 1967 data. The study compared the usefulness of elite (upper management) values and organization structure in predicting innovation and found that value explanations were better than structural ones although complexity was almost as effective. Combining elite values with complexity explained about 60% of the variance in adopting new programs. Kimberly and Evanisko (1981) using the Moch and Morse (1977) data set, studied the influence of individual, organizational and contextual factors in hospital adoption of technological and administrative innovations. Here, organizational level variables were the best predictors of the adoption of both types of innovations.

In a more recent study of structural variables and the innovation process, Zmud (1982) studied firms' adoption of modern software packages. Following thinking that the extent of centralization and formalization may facilitate or impede innovative behaviour depending on the innovation

phase, Zmud makes an important contribution by studying the

interaction of stages of the adoption process in relation to

structural variables. As well, Zmud looked at the

compatibility of the innovation in relation to the effect of

structural variables. This study is of particular relevance

to the current thesis because it also studied a process

innovation in a business firm setting. Zmud discussed the

implications particular to process innovations:

> Product innovations, hence, would tend to be
> accompanied by shifts in organizational resource
> allocation patterns while process innovations
> would tend to result in shifts in individual task
> behaviors. As centralization and formalization
> contribute to the perceptions held by organizational
> members toward the legitimacy of their task
> behaviors, it is likely these two variables might
> exert a relatively greater force with process,
> rather than product, innovations (Zmud, 1982: 1424).

He found that size and professionalism both tend to support

technical innovation through all three phases.

Formalization and centralization were positively associated

with implementation for technical innovations when

controlling for industry, size and professionalism.

Beyer and Trice (1978) examined structural variables

in relation to implementing an innovation, specifically the

implementation of a program to deal with alcohol problems of

federal government employees. All government departments

studied had begun initiation of the program so the

researchers studied (a) the implementation of the change

(which involved diffusing information to all involved

members, allocating resources to the implementation, forming attitude reactions and specifying role behaviour changes), and (b) the institutionalization of the change (which involved internalizing the goals of the program). Seventy-one programs were studied by collecting data from supervisors, coordinators and other personnel. The study is very comprehensive, utilizing many measures of all variables but this makes the findings very difficult to interpret as some measures show significance while others do not.

This overview illustrates that three structural variables are often studied in relation to innovation adoption - centralization, formalization, and complexity. Hypotheses about each of these variables are developed below.

Centralization - Decentralization

Centralization refers to the degree of participation of organization members in organization decision-making. A low degree of participation is found in highly centralized organizations. There is a consensus that participativeness (decentralization) contributes positively to the initiation phase of the innovation process (Hage and Aiken, 1967; Hage and Dewar, 1973; Moch and Morse, 1977; Mohr, 1969; Robertson and Wind, 1980). The general thinking is that concentration of decision-making prevents imaginative solutions and input from diverse sources, hindering innovation adoption (Hage

and Aiken, 1970; Zaltman et.al., 1973).

There has been some argument about the effects of centralization on the implementation subphase, but very little research. One view is that during the <u>implementation</u> stage stricter channels of authority (centralization) may reduce conflict and ambiguity and promote successful implementation (Zaltman et.al. 1973). The other side argues that decentralization promotes effective implementation. The results from the Beyer and Trice (1979) study led them to conclude that decentralization fosters change efforts while centralization inhibits change.

> [The data] do not fit the speculations about
> 'ambidextrous organziations' that have been
> stressed recently: that successful
> implementation may require centralization,
> less complexity and perhaps even role
> formalization while the initiation of change
> requires decentralization, high complexity,
> and unformalized roles (Beyer and Trice,
> 1979: 209).

The Zmud (1982) study referred to earlier, tried to resolve this lack of agreement on the influence of centralization. He hypothesized that if the innovation was seen as wanted by organization members, the increased openness and flexibility in individual behaviours that often accompany decentralization would result in more extensive implementation. When the innovation was not wanted by organization members, the opposite would result. Zmud

defined a priori that the members of the adopting unit in his study did not want the innovation. As he expected, he found centralization was positively associated with implementation of not wanted technical and administrative innovations.

Following Zmud, this researcher expects that centralization will be positively associated with successful adoption of innovations not wanted by members of the organization, and negatively associated with more wanted innovations. The real difficulty the researcher faces in following Zmud's approach is in making a judgment about whether the organizations want or do not want the innovation. On the one hand, it is reasonable to assume that telemarketing would not have been adopted if it were not wanted. On the other hand, it is likely that some organizations would have wanted the innovation more than others, and within organizations, there would also be variance. These issues require investigation to truly test Zmud's ideas.

By drawing a random sample and actually measuring whether organization members want the innovation, it is anticipated that telemarketing is likely to be more favored by some organizations than others. The ideal would be to collect these measures at the time of adoption of the innovation. However, it is extremely difficult to do this, given the pattern of adoption of most innovations - different firms would be going through this adoption decision period at different times. It would be exceedingly difficult for a researcher to identify and reach a large number of firms all at this stage. Two alternatives exist for solving this problem. Zmud defined at the outset of his research that the organizations had not wanted the innovation. (The problem with this approach was discussed above). The other alternative is to use a retrospective measure and enquire whether telemarketing was wanted at the time of adoption. The advantage of the retrospective approach is that one can measure organizations that exhibited different degrees of want for the innovation. The major disadvantage is the possibility of inaccurate recall. Because the retrospective measure is used here, the issues associated with a respective measure will be discussed in more detail in Chapter 3.

H1 - Centralization is positively associated with the successful adoption of less favored tele-marketing innovations and negatively with successful adoption of ones that are more favored.

For ease in interpretation, this hypothesis can be visualized
as follows:
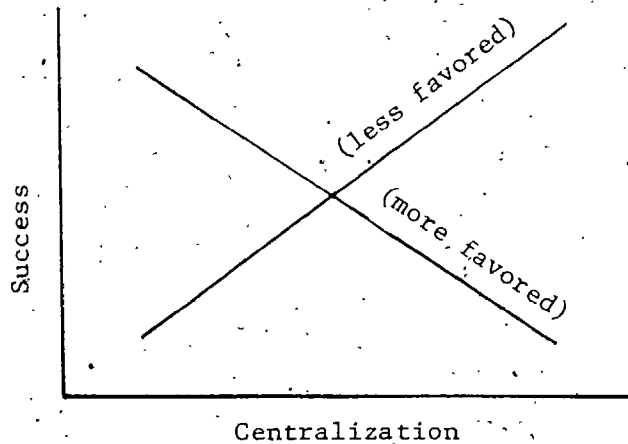
Formalization

Formalization refers to the degree to which a codified
body of rules, procedures, or behaviour prescriptions is
developed to handle decisions and work processes in an
organization (Beyer and Trice, 1978; Pierce and Delbecq,
1977; Zaltman et.al., 1973). As such it is expected that
formalization will be positively correlated with
organization complexity. Rigid rule specification and
observation is seen as inhibiting ideas, creativity, and
therefore initiation and adoption of innovations (Cummings,
1965; Evan and Black, 1967, Hage and Aiken, 1967; 1970). By
contrast, singleness of purpose is often seen as required
for effective adoption and implementation of ideas (Evan and
Black, 1967; Mohr, 1969; Pierce and Delbecq, 1977; Rogers,
1983; and Zaltman et.al., 1973).

Neal and Radnor (1973) examined the relation between formalization of OR/MS procedures and OR/MS group success in 108 US industrial organizations. Formalization was measured rather crudely by the presence of an OR/MS charter. They reported that procedural elaboration was positively related to success. The problem with the study is that the presence of a charter may simply be an indication of a clear strategic role for OR/MS rather than a true indication of the formalization of the organization.

Zmud (1982) in the study described above, also hypothesized that formalization would be positively associated with the implementation of administrative and technical innovations. The reasoning is that formalization not only constrains individual behaviour but serves to socialize the organization members into particular organization norms - resulting in facilitation of implementation. His study of 49 software development managers supported this hypothesis.

Many writers suggest that change processes require organizations to be ambidextrous in structure in the innovation adoption process, with different stages requiring different structural arrangements (Pierce and Delbecq, 1977). The findings of Neal and Radnor (questionable due to the construct validity problem), and Zmud regarding implementation would tend to support this idea. Beyer and Trice (1978) found considerable support for the hypothesis

that formalization led to <u>decreased</u> likelihood of successfully implementing the innovation. One possible reason for this finding is that success in implementation was measured by the diffusion of the alcoholism program throughout the organization rather than actual success of the program implementation itself.

On balance, the evidence regarding formalization and implementation of an innovation is quite meagre and almost equal. One well designed and comprehensive study examined OR/MS practices where formalization was positively associated with implementation of innovations (Zmud, 1982). Conflicting findings were reported in the detailed Beyer and Trice (1978) government alcoholism study.

H2 - Formalization in the salesforce is positively related with successful implementation of telemarketing.

Complexity

Complexity is often conceptualized in three dimensions: (1) the extent of differentiation of tasks, (2) the number of occupational specialities, and (3) the professionalism of organization members (Beyer and Trice, 1979; Blau and McKinley, 1979; Hage and Dewar, 1973; Zaltman et.al., 1973). The basic theoretic argument regarding complexity states that (a) diversity of subunits generates competition for resources which leads to change (Hage and Aiken, 1967; 1979; Hage and Dewar, 1973), (b) diversity in

occupational specialization leads to input of various ideas

and suggestions for innovation (Hage and Aiken, 1967; 1970;

Hage and Dewar, 1973), and (c) introduction of diverse kinds

of professionals who maintain contact with their field is

associated with new ideas and is positively related to

innovation (Evan and Black, 1967; Hage and Aiken, 1970; Hage

and Dewar, 1973). This argument appears to make intuitive

sense for the current study. One could see competition for

resources between diverse salesforce subunits such as

national account groups, technical groups and/or

geographical subunits. It is probable that this competition

for resources would tend to promote and generate change. As

well, diversity in occupational specialization (technical

sales reps, order takers, key account specialists etc.)

could lead to greater input of new and innovative ideas to

the sales organization.

The value of constructive conflict (Lawrence and

Lorsch, 1967) and the absence of a single professional

ideology (Mohr, 1969) are considered to be factors

stimulating the initiation of innovation proposals.

However, these same factors are seen by some researchers as

working against the implementation of innovations-

stimulating a resistance to change (Zaltman et.al., 1973:

137).

> [At] the implementation stage high complexity, because
> of potential conflicts, makes it more difficult for
> the organization to actually implement the innovation.

Pierce and Delbecq (1977) propose that complexity will be positively related with all 3 stages of organization innovation but the association will be stronger for the initiation phase. In the Beyer and Trice (1978) study regression analysis revealed that 3 indicators of complexity - horizontal differentiation (number of subunit heads reporting to director), functional differentiation (number of job titles in a unit) and division of labor had positive effects on implementation.

Once again, the evidence is mixed but suggestive of a positive relationship between complexity and successful implementation.

H3 - Complexity (division of labour and differentiation) of the salesforce is positively related with successful adoption of telemarketing.

Organization Size. Organization size has consistently been found to relate positively to innovation adoption (Baldridge and Burnham, 1975; Zmud, 1982). The reasons are not entirely understood. One explanation suggests that increased size means more available resources for innovation (Hage and Aiken, 1973). Another explanation is that size is highly correlated with complexity (Baldridge and Burnham, 1975) and complexity is positively correlated with adoption. In research focussing on the post-adoption phases of the adoption process, Beyer and Trice (1978) found that size had a positive effect on implementation and Zmud (1982) found

that size supported technical innovation implementation but
was negatively associated with implementation of
administrative innovations. In keeping with this earlier
work, size is expected to be positively correlated with
salesforce complexity. Since this research is not designed
to sort out the theoretical complexities of the relationship
between size and innovation success in adoption, no specific
hypothesis concerning the effect of size on success is
developed.

<div align="center">Sales Management Support</div>

It is intuitively attractive to think of success in
innovation adoption being related to support of the
innovation by management. As early as 1971, Rogers and
Shoemaker suggested the importance of a system's norms in
affecting innovation-adoption behaviour. They
conceptualized such norms as traditional (lack of favorable
orientation towards change) and modern (favorable
orientation toward change). The Hage and Dewar (1973) study
of health and welfare organizations supports the idea that
positive orientations to change among decision makers is a
better predictor of innovation adoption than any one
structural variable. Cohn (1980) found support for this
finding in business organizations. He studied factors
associated with industrial organization adoption of
technical innovation in 50 randomly selected footwear
manufacturing firms. Firms whose decision makers

(identified by the manager as most knowledgable about capital acquisition decisions) were more favorable to change were more likely to adopt new technologies.

Whether support of general change is related to support of specific change (in this case an appraisal scheme change) was studied in a sample of 258 managers from 8 companies (Kirton and Mulligan, 1973). The results supported the notion of a general readiness for change underlying attitudes toward change in a specific area. Mohr (1969) found that health departments whose administrators showed less favorable attitudes toward traditional technologies were more likely to adopt innovations. In none of these innovation studies was successful implementation of the innovation the dependent variable.

Change theorists have emphasized that managerial support of the change increases the likelihood of successful change (Beckhard and Harris, 1977; Greiner, 1967; Kimberly, 1981). Beyer and Trice (1978) found that supervisors' attitudes toward the change were one of the most important and consistent predictors of implementation. Several OR/MS studies on implementing OR/MS activities also lend support here (Radnor et.al.1968; Radnor and Neal, 1973).

In an excellent study of change in 19 urban service bureaucracies (police, fire and education), Yin examined post-adoption behaviour. He was especially interested in

how new practices become routinized or become part of the common services routinely engaged in or provided by the organization. He adopted a life-history approach — methodology which involved (a) selecting 6 innovations adopted and implemented by agencies at some time in the past, then (b) interviewing administrators at these organizations in order to construct a life history of the innovation. Routinization was studied by examining the life histories of these innovations. The life histories were analyzed in terms of the achievement of ten specific organizational events, which have been conceptualized as transitions from one organizational state to another, or survival through periodic organizational events. The routinization process consists of: (a) improvisation, (b) expansion, and (c) disappearance.

Yin concludes that for routinization to occur, every innovation needed some person(s) in the agency to serve as an active innovator. Given an active innovator, an innovation was more likely to become routinized if it had the support of top administrators and practitioners. Outside client or community support did not appear to affect routinization. While recognizing the shortcomings of the study - reliance on recall data and exclusion of business organization, it still seems appropriate to suggest that management support plays a critical role in the successful adoption of telemarketing. The thinking here is that if top

management is seen as strongly supportive of the change or innovation, their enthusiasm will be an impetus to the entire organization - the innovation will be seen as serious and important.

In this study, these previous findings have been combined and interrelationships have been proposed. It is proposed that sales management support of innovation generally will lead to support for the telemarketing innovation specifically, and this positive support will lead to an improved resolution of implementation issues. Even though previous research and theory primarily refer to management support for an innovation, this study formulated hypotheses including both sales management and sales reps. Sales reps occupy the interesting position of being managers of their own sales territories but are not usually considered part of management structure. Favorable attitudes among this group (that is most directly affected by the implementation of the innovation) are thought to be equally important to that of upper management. However, it is likely that sales reps do not have the same influence over the implementation process as sales management. Therefore it is hypothesized in H5 that sales rep support of telemarketing will have a direct affect on success while sales management support of telemarketing will lead to an improved resolution of implementation issues.

H4 - (a) Sales management support of innovation is positively associated with support of telemarketing by sales management.

(b) Sales rep support of innovation is positively associated with support of telemarketing by sales reps.

H5 - (a) Sales management support of telemarketing is positively related to the resolution of implementation issues.

(b) Sales rep support of telemarketing is positively related to success.

Process of Implementation

Resolution of Implementation Issues

The two sets of variables discussed to this point, are ones that have been researched primarily in relation to the adoption decision substage. Because the emphasis of this study is the confirmation or implementation stage, implementation variables are likely to be of considerable importance.

Adopting a practice innovation such as telemarketing requires change by the organization. Successful management of change has been discussed extensively (Beckhard and Harris, 1977; Benne and Bernbaum, 1969; Chin and Benne, 1976; Ginzberg, 1975; Greiner, 1967; Kolb and Frohman, 1970 and Zaltman and Duncan, 1977) but empirical studies are comparatively rare. Several models of organization change have been advanced in the literature (Lewin, 1952; Beckhard and Harris, 1977; Mikalachki and Gandz, 1982). The Lewin three step model - unfreeze, move and refreeze is probably the most familiar and the others tend to be variations on

it. Overall, this literature is comprised of considerable
theorizing as to the steps to successful change. The basis
for this prescription is largely author experience and case
studies. Major work in management of change has recognized
that in most instances, there is a felt need for change, and
at the same time, resistance to that change. Much work has
focussed on the process of change (Kolb and Frohman, 1970)
as well as strategies for change and overcoming resistance
to change (Beckhard and Harris, 1977; Zaltman and Duncan,
1977).

The theory therefore suggests that the felt need for
change on the part of sales managers in many companies
(which leads them to consider telemarketing) will be met by
resistance on the part of some members of that organization.
This resistance is particularly important at the
implementation stage. For example, one of Zaltman and
Duncan's (1977:89) general principles is:

> The system should try to provide rewards - incentives
> to participants for adopting the change or innovation -
> that are attractive to them as a way of reducing their
> resistance.

Frank and Hackman (1975) conducted a case study of a failure to make a successful change to semi autonomous work groups in a bank. Although based on only one case study, several useful ideas are suggested regarding successful implementation of organizational change techniques that involve the redesign of work. The goal was to enrich jobs but either no effect occurred or jobs got worse. A primary problem was the failure to set up mechanisms to deal with both expected and unexpected problems and resistance. The importance of establishing problem solving mechanisms has been pointed out by other change theorists as well.

Other steps identified as critical in the change process include: setting goals and defining the future states, determining how to initiate the change (i.e., unilaterally or shared), being certain that target groups have the ability and motivation to implement change, planning and conducting an evaluation and restoring stability to the organization unit (Beckhard and Harris, 1977; Frank and Hackman, 1975; Greiner, 1967).

A very interesting piece of research that tried to bring many of these ideas about successful change into one study was conducted on MIS innovation implementation by Ginzberg in 1975. On the basis of existing change literature, Ginzberg defined major issues which have to be resolved in order to have successful change. These issues included setting goals, planning, anticipating and

overcoming resistance to change, and so on. He hypothesized that those organizations that resolve more issues successfully would achieve more successful change and found that differences between successful and unsuccessful implementation efforts could be accounted for by differences in the implementation process.

A logical proposition developed from the work of these change theorists is that the better the resolution of the steps that characterize the implementation process (setting goals, planning, anticipation and overcoming resistance to change, providing motivation and training, and evaluating the process) the more successful telemarketing innovation adoption will be.

H6 - Success in telemarketing adoption efforts is positively related to the resolution of implementation issues.

Innovation-Organization Match

Rogers (1962 and 1983), Rogers and Shoemaker (1971) initially conceptualized that an important ingredient in the adoption decision is the innovation's characteristics as perceived by the individual.

> [D]iffusion researchers have often tended to regard all innovations as equivalent units from the viewpoint of study and analysis. This is an oversimplification and a dangerous one. (Rogers and Shoemaker, 1971; 136).

They specified five characteristics as important in adoption of innovations: relative advantage, compatibility,

complexity, trialability and observability. All of these characteristics have been researched in relation to rates of adoption (See Rogers 1983: pages 220-221). Of these five characteristics, compatibility of the innovation with the organization is most likely to be important in the implementation phase. Trialability, observability, relative advantage and complexity are likely to be more constant because we are considering only one innovation in this study - not several as in most studies.

Compatibility

Compatibility is the degree to which an innovation is perceived as being consistent with the existing values, past experiences, and needs of the receivers (Rogers, 1983). Rogers and Shoemaker (1971) hypothesize that discontinuance is more frequent when an innovation is less compatible. For telemarketing then, telemarketing success is more likely in firms where it is perceived as compatible.

Compatibility has received some research attention. However, Rogers (1983) himself has warned that measuring perceived compatability is difficult. Zmud (1982) used the concept in his research cited earlier but made the decision himself about the compatibility of the innovation for the organization. He conceptualized compatibility as favorable attitudes to the innovation as opposed to the extent to which it is perceived as consistent with past experiences

and present needs and values.

Part of the problem in measurement is probably accounted for by the lack of theoretical clarity. There are at least two dimensions to the Rogers' concept: (1) consistency with past practices and experiences, and (2) consistency with current values and needs. One concept that includes both dimensions is bound to be a little unreliable and yield less than satisfactory research results.

In this study, Rogers' compatibility concept has been broken into the two dimensions cited above. Compatibility in this thesis refers to the first dimension in Rogers' conceptualization - consistency with past practices. It seems reasonable to make an assessment of how similar a new innovation might be with past practices. Any innovation might be quite similar to past practices for some organizations and dissimilar for other units. To use the telemarketing example, organizations where sales reps used the phone in selling to a high extent and/or where an order desk was used would find telemarketing closer to existing practices and experiences than companies without those practices. The second dimension posed in Rogers' conceptualization of compatibilty - perception of consistency with current needs and values has been taken out of the compatibility construct in this study, and is assumed to be better embodied in the concept - management support of telemarketing.

By partitioning Roger's compatibility concept this way, interrelationships between concept dimensions can be investigated in this study and the concept can be clarified. The model suggests that companies have a need for change, but at the same time, this is balanced against a need for consistency with past practices. Therefore, both compatibility and attitudes to change are hypothesized as positively affecting attitudes toward the specific innovation - telemarketing. A secondary benefit of this approach is that greater consistency with other bodies of research literature is achieved. Management support of change and innovation are concepts frequently used in change and MIS research.

Compatibility is likely to vary from organization to organization as outlined by Downs and Mohr (1976: 704):

> When we think in terms of a continuous dimension, such as the extent to which an innovation is compatible with the organization's present mode of operation, the amount of variance across organizations is even more conspicuous.

Those organizations where the innovation is very consistent with past practices are likely to have more positive attitudes toward it.

H7 - (a) Compatibility of telemarketing is positively related to positive support of telemarketing by sales management.

(b) Compatibility of telemarketing is positively
related to positve support of telemarketing by
sales reps.

Use of the Innovation

One of Yin's (1979: 152) key conclusions in the study
of 19 urban service bureaucracies described earlier, is that
an innovation is more likely to become routinized if it was
used for core functions in the organization:

> The potential importance of the core application
> attribute should not be overlooked. An innovation
> covered a core application if it displaced some
> existing function... or if it was a new function
> that publicly redefined the basic mission
> of an agency....

The basic idea is that innovation has a greater chance
for success when integrated into central tasks and functions
of the organization rather than remaining on the periphery.
This is a very intriguing idea for the problem at hand. It
suggests that if telemarketing is used to perform existing
core functions of the salesforce, it will be more successful
than if it is used for new or more peripheral applications.
For example, in two of the case studies done in preparing
for this work, Control Data Corporation implemented
telemarketing to pursue accounts in a new market that had
been peripheral to the company. Hallmark used it to perform
some of the functions previously performed by the outside
salesforce. This hypothesis would suggest that perhaps

Hallmark was more successful because telemarketing was used for core functions.

H8 - More successful implementation of telemarketing
will occur in organizations where telemarketing
is used for core functions of the salesforce.

Summary

This chapter began with a review of several key models of innovation adoption. The more detailed model of organizational factors hypothesized as leading to successful adoption was then developed and presented. The major portion of the chapter was devoted to identifying and discussing the variables incorporated into this model and to proposing paths of influence between these variables.

Much of the previous research on the organization structure variables has studied the relationships between organization structure varibles and adoption. This research extends that tradition by studying relationships between organizational structure variables and adoption success. This research tries to extend the previous work on management support, compatibility, core application, and resolution of implementation issues by modelling the interrelationships between these variables and others in the model.

Many complex constructs have been introduced into the hypotheses developed in this chapter. The next task was to design a way of measuring these constructs and collecting the data necessary to test them. Chapter 3 describes the data collection and construct operationalization procedures.

CHAPTER 3 - RESEARCH METHODOLOGY

The purpose of Chapter 3 is to present the methodolgy used to test the research model and hypotheses. In the first half of the chapter, methodological issues including research design, sampling, data collection and telephone interview procedures are discussed. Construct operationalization procedures are given in the last half of the chapter.

Research Design

Data to test the hypotheses and proposed model were collected from a cross-sectional field survey of industrial firms that had adopted telemarketing in the recent past. A longitudinal design would offer the researcher the obvious advantage of following an organization from the adoption decision through implementation allowing rigorous testing of variables with no dependence on recall. The advantage of a cross-sectional field survey for this study is that it allowed comparison of a larger number of firms including less and more successful ones at relatively low cost. Many variables (success, centralization, formalization, division of labour, differentiation) did not require recall on the part of respondents. For those variables that did require recall, attempts were made to minimize the problem as much as possible by asking for relatively objective information

and by interviewing multiple key informants from each firm.

Research focussing on organization variables is relatively recent in marketing (Phillips, 1981). Gathering solid data about organizations in general and organization innovation in particular, presents some unique research design problems. All organization researchers face two basic decisions - (1) whether to employ a "survey" approach (surveying individuals within an organization about the organization), or an "institutional" approach (utilizing organization charts, papers and memoranda to measure selected variables), and (2) if using a survey approach, whether to use the respondent or key informant approach.

The survey approach is probably more common in marketing (Phillips, 1981; John and Martin, 1984; Spekman and Stern, 1979). A questionnaire or interview schedule is constructed that operationalizes the variables of interest to the researcher. The institutional approach involves gaining access to organization documents such as organization charts and manuals to measure organization structure variables. This study utilized the survey approach because many variables of interest in the research model could not be readily operationalized from such documents (for example, sales reps' support of telemarketing). Key informant methodology as opposed to respondent methodology was also selected. The major issues associated with this approach are discussed later.

Because this research focuses on organization innovation, some unique problems had to be faced. These issues have been raised by Rogers (1983) and others. Rogers (1983) has categorized <u>organizational</u> innovation studies into two camps: (1) variance explaining studies and (2) process studies. Variance explaining studies model a number of variables to explain the variance in selected dependent variables. Process studies are more longitudinal in nature and try to study the process of innovation adoption. He is very supportive of the process studies because they have looked within the organization at the actual process of innovation adoption. He acknowledges that the variance studies have their place, but it is not to unravel the actual process.

Rogers offers three criticisms of the variance studies. The first problem associated with these studies is that the dependent variable (innovativeness) is often measured as a composite score composed of the adoption of from ten to twenty innovations. The problem that results in these cases is that differences among innovations become lost. This study has tried to avoid this problem by examining a different dependent variable (success) and by studying only one innovation rather than a wide range of different ones.

A second problem with variance studies is that the time dimension is lost. The goal of the current study is

not to study the entire process, but rather to build on

previous process studies by attempting a more quantitative

study of only one stage of the process for one type of

innovation. There is still a time dimension to be

considered as implementation takes place over time - the

model of the confirmation stage has a particular time

sequence built into it. However, the goal of the present

study is fundamentally different from a study whose purpose

is to describe the actual time sequence of events or stages

in the process. Here, the time order of events as described

in the process studies is taken as given and the purpose is

to assess the effects that certain variables will have on

others.

The third problem cited by Rogers is dependence on

data provided only by the chief executive. The question

raised, is how well the data provided by one chief executive

can represent the behaviour of all relevant members of the

organization. As will be shown, this study uses data from

at least two organization informants who were involved in

the innovation adoption decision in an attempt to better

represent the behaviour of members of the firms who were

involved with the innovation. Issues involved in using key

informant methodology will be discussed in the next section.

Key Informant Methodology

Key informant methodology is a very common way of gathering organization data both in Anthropology and Sociology. It has recently been used in several marketing studies (Phillips, 1981; John and Reve, 1982). According to Phillips (1981) who has used this method in studying distribution channels, key informant methodology means that a small number of knowledgable participants in each organization provide data about their organization. Seidler (1974: 816) states that the informant technique involves "reliance on a small number of knowledgeable participants, who observe and articulate social relationships for the researcher". Persons taking the informant role are often given criteria such as "How much friction is there compared to the normal amount found in a functioning organization?" They are asked to make implicit calculations such as "What is the most-common way that a supervisor acts?" There is a key difference between respondents and informants (Seidler, 1974). In the informant approach, the informant is asked to do summarizing for the researcher and to think in terms of the organization. Using the respondent approach for organizational measures, the researcher should technically obtain information from a representative sample of all individuals of each of the organization units to which the measure applies. The researchers summarize the responses.

The use of this methodology in the present study is of

special interest because past business research applications

have focussed on the ability of key informants to provide

reliable and valid data on interfirm dyadic relationships

(Phillips, 1981; John and Reve, 1982). In fact, because the

previous research in this setting has shown that informants

can be unreliable when reporting perceptual and non-concrete

variables, John and Martin (1984) opted for the respondent

approach in their recent study of relationships between

organizational structure and marketing planning. In this

study, key informant methodology was chosen because the unit

of analysis was a single innovation adoption. Informants

were being asked to supply data on a somewhat simpler and

smaller unit - a marketing subunit - the salesforce. As

well, they were asked to provide information about a

relatively specific issue (the adoption of an innovation) as

opposed to more nebulous issues of power relationships.

Both of these factors should improve the ability of key

informants to give good information.

Selection of the Key Informants

Key informant methodolgy requires identification of

the key informants. This is typically done either by asking

a manager to name informants or by selecting positions and

the individuals occupying these positions to act as key

informants.

In marketing studies, the approach of asking a manager
to recommend informants has been more common. Two examples
of uses of this methodology are interesting. Spekman and
Stern (1979) asked the purchasing agent to identify all those
in the firm with whom he discussed a potential purchase.
These individuals were all considered to be part of the
buying group and therefore key informants. They were all
sent questionnaires. Phillips (1981) sent letters to 3372
CEOs explaining the purpose of his study and soliciting
cooperation. Each CEO was asked to supply the names and
titles of other personnel in their company who would act as
respondents. Guidance was provided to the CEOs in selecting
the respondents. Participation was obtained from only 682
firms. For a company to be included in Phillips' survey,
responses had to be obtained from the CEO and at least one
other respondent. In his recommendations, Phillips suggests
that the use of a single report ought to be abandoned and
that greater attention ought to be devoted to selection
criteria for obtaining key informants.

There appears to be some potential for bias in asking
managers to name key informants. Perhaps they will choose
informants who are most likely to provide favorable reports
of the telemarketing unit's operations. This problem would
only be critical if there was a tendency for high performing
unit managers to behave differently than managers of poorly
performing units. It is likely that this bias is constant

across high and lower performing units.

The major difficulty in selecting positions a priori
and using individuals in those positions as key informants
is that titles of individuals directly involved with
telemarketing varied greatly between firms. This logistical
problem outweighed the major advantage - that informants
occupying identical positions could justifiably be presumed
to have similar access to information and similar
perspectives or biases.

A hybrid approach was used in this research. The
Telecom senior manager contact persons were the initial key
informants. (A Telecom contact person is a senior marketing
manager in an organization that has adopted telemarketing.
The contact person was the individual in the firm that was
initially approached by the marketer of telemarketing.)
This contact was asked to supply names of one or two other
informants who would be most suited to provide additional
information about the salesforce and telemarketing.
Following Phillips (1981) recommendation, several criteria
were used in selecting the informants:

(a) key informants should have been in the organization when
the adoption decision was made;

(b) they should be able to provide information about the
telemarketing and salesforce operation in the company
generally;

(c) they should represent a variety of management levels in
the company. The goal was to obtain at least two
perspectives: (i) a general strategic marketing perspective
from senior managers (usually the initial contact person)
and (ii) an implementation perspective from those directly
involved with implementation of the innovation.

These guidelines were used by the interviewers when
asking for the name of a suitable second informant. For
instance, when the first informant was a strategic type, he
was asked if it would be possible to recommend someone
directly involved with implementation. An advantage in
using an interviewing technique was that these criteria
could be discussed with the initial contact when seeking the
name of a second informant.

Sampling

The population of interest included all industrial
firms (with over $1 million in annual sales volume) in
Canada that had adopted telemarketing to perform sales
support or actual sales functions in the salesforce. No
perfect sampling frame of that entire population existed.
However, the sampling frame used in this study is a
reasonably good approximation. A list of all firms in the
Manufacturing and Wholesaling/Distribution sectors that were
sold Phone Power Programs by Bell Canada in Ontario over the
period June 1980 to December 1982 was the basic sampling

frame. (Bell Canada is the company that actually sells telemarketing programs. Telecom is an umbrella organization of all telephone companies in Canada. One of Telecom's responsibilities has been to develop telemarketing and Phone Power programs for its member companies). Phone Power is the brand name used by Telecom to apply to its line of telemarketing and other phone programs. The Phone Power product consists of hardware - watts lines and other equipment, as well as a training program on the use of telemarketing for specific applications. There are many types of Phone Power Programs including (1) selling to existing customers, (2) opening new accounts, (3) collecting overdue accounts, (4) handling inquiries, (5) marginal account management, (6) market research, among others.

Telecom supplied the researcher with selected data about each firm: (1) company name, address, phone number, (2) one or two senior marketing contact people in the company, (3) telemarketing adoption date, (4) telemarketing application being used by the company, (5) company sales, (6) incremental tolls incurred by the company attributable to the telemarketing program during the first three months of use. Based on this data, the researcher eliminated all non-telemarketing applications and developed a list of 364 Ontario companies using telemarketing as defined earlier (a strategic approach to using the phone and supporting telecommunications for active personal selling tasks).

This definition was operationalized in the following way. A strategic approach was considered to be followed if a company bought one of Telecom's Phone Power Programs. The company would have had to make some conscious decision about what its needs were and what role Phone Power would play in its marketing mix when buying into one of these programs. For example, if a company wanted to handle marginal accounts via telemarketing, it would buy a combination of out-bound watts lines and would discuss needs and the proper hardware configuration with a sales representative from Bell Canada responsible for selling Phone Power Programs. Part of the package would include a day long seminar conducted by Phone Power Consultants on using telemarketing for marginal accounts. Active selling tasks were being performed if the company's Phone Power applications included: selling to existing customers, opening new accounts, qualifying prospects and making appointments, reactivating inactive accounts, managing marginal accounts, and prospecting. Any firm who was doing only market research, only handling inquiries or any other non-selling type tasks, or performing only relatively passive tasks was not included in the sample. Using the Telecom supplied data on each firm, the researcher developed the list of firms using telemarketing by applying these criteria.

A potential for bias in the sampling frame exists because it is conceivable that firms have adopted

telemarketing without going through Telecom. However, given
that special hardware (i.e., special 800 lines) is required
to operate telemarketing programs most economically, and
that Telecom offers free seminars to companies setting up
programs, it is likely that most telemarketing programs have
involved Telecom. Some companies may use telemarketing on a
strictly local level without involving any long distance and
they may have been missed in this sampling frame.

Data Collection Procedures

Data collection procedures involved three steps: (1)
Telecom preliminary contact interviews, (2) introductory
contact letters, and (3) telephone interviews. During step
one, the Telecom Canada Telemarketing Unit conducted
preliminary telephone interviews with 283 firms selected at
random from the sampling frame. This represented a high
proportion of the total frame - about three out of four
names were selected. (Because telemarketing is an
innovation, the total sampling frame is rather small). The
purposes of this interview were to secure cooperation for
the study and to update information on the firm's address
and telephone number. The interviewer explained that a
researcher from the School of Business at the University of
Western Ontario was conducting a study on telemarketing.
The interviewer asked if the firm would be willing to
participate in the study. The respondent was told that if

they agreed to participate, Telecom would pass their name to the telemarketing researcher. This interview was seen as necessary for protecting customer relationships by Telecom Canada, who thought that a "cold" call from university researchers might concern some customers.

The disadvantage of this interview being conducted by Telecom was the risk that some companies might associate the study with Bell Canada even though it was conducted totally independently. More importantly, it was thought that refusals may have been higher than they would have been had the researcher (who had greater familiarity with the study and greater determination to overcome objections) conducted the interviews. However, these disadvantages were largely counterbalanced by two factors. The interviewers were all very experienced in telephone interviewing in general, and with these types of firms in particular. As well, there were an extremely high number of firms whose addresses, telephone numbers, and contact people had changed since the sampling frame data had been compiled. This interview yielded more accurate data about companies who agreed to participate thus facilitating the remaining data collection.

Table 3.1 gives the results of the preliminary contact telephone calls. A total of 131 companies agreed to participate in the study, 27 could not be contacted after five or more calls, and the remainder refused or could not

be contacted because the contact was no longer with the company or the company had gone out of business.

Table 3.1

Response Rates From The Telecom Contact Interviews

	N	%
(1) Agreed to participate	131	46.3
(2) Could not be contacted *	27	9.5
(3) Did not agree to participate	125	44.2
(a) Company moved or out of business	11	
(b) Contact no longer with company	47	
(c) Refused		
(i) Too busy	34	
(ii) No interest	17	
(iii) Other (never implemented telemarketing)	16	
Total initial sample	283	100.0

* At least 5 calls were made in an effort to contact all firms.

0

At step two, the researcher sent initial contact
letters to the contact persons in the 131 companies who had
agreed to participate in step one and to the 27 companies
that interviewers had not been able to reach. The letter
explained the purpose of the study and indicated that a
follow-up telephone call would be made in about one week
from the date of the letter. The purpose of the preliminary
letter was to establish the credibility of the researcher
(sent on University Doctoral Research letterhead) and
prepare the contact for the telephone interview. A copy of
the letter can be found in Appendix A.

During step three, the telephone interviews were
completed. Respondents were called and asked whether they
could participate in a 30 minute interview right then. If
not, an appointment was made for a convenient time and the
interview was conducted at that time. At the conclusion of
this interview, the initial contact was asked to recommend
one or two others in the organization who could be
contacted. As noted earlier, the contact people were
typically senior sales managers, marketing vice-presidents,
or company presidents. Getting a recommendation for a
second informant from these senior managers proved very
successful. They usually recommeded individuals junior to
them who had been or still were associated with the
implementation of telemarketing. Identical telephone

interviews were conducted with these key informants.

In the case where the initial contact was in a lower position in the firm and recommended a second informant who was higher in the organization, a contact letter was sent to this individual and then he/she was telephoned for the interview.

Given the limited resources available for data collection, a goal of interviewing two or more informants in a minimum of 100 salesforces was established. Dillman (1978) reported that most telephone interview studies have achieved response rates in the 80-90% range. However, Assael and Keon (1982) obtained a considerably lower proportion of participants (52%) among small businesses in their study designed to assess sources of survey error. In the process of conducting interviews with the 158 companies who had already been sent letters, it appeared likely that the researcher might not achieve the sample of 100 companies with two or more informants per company. Only one informant could be obtained in some companies; and in other cases, once the interview was in progress, it became clear that the company was not using telemarketing as defined for the study. On the basis of these considerations, 48 more companies were randomly selected and sent contact letters. Table 3.2 summarizes total company contacts and responses.

Table 3.2

Company Contacts and Response Rate Summary

(1) Total salesforces interviewed   139

   (a) Two or more informants per firm   110
   (b) One informant per firm   29

(2) Total non-respondents   192

   (A) Telecom Interviews - Unable to Participate   125
      (a) Company relocated or out of business   11
      (b) Contact no longer with company   47
      (c) Refused
        (i) Too busy   34
        (ii) No interest   17
       (iii) Other (never used telemarketing)   16

   (B) Non-respondents screened at next stages   67
      (a) Non-useable   7
      (b) Company out of business   5
      (c) Could not be contacted   8
      (d) Never implemented telemarketing   26
      (e) Refused   9
      (f) Contact no longer with company   12

Total sample selected (initial sample (283) plus 48)   331

   (3) Response rates:

      (a) Completed interviews as proportion of   45.0%
        the total sample

      (b) Completed interviews as proportion of
        eligible companies (eliminate all
        companies in other, contact not there,
        company out of business, not using
        telemarketing (331-117=214)   65.0%

Overall, useable interviews were completed with 139
companies. In 110 companies two or more informants were
interviewed. Every attempt was made to obtain at least one
additional informant from the initial contact. This was
handled with great care so as not to offend the individual
who had already spent 30 minutes being interviewed. The
interviewers explained that we did not doubt his or her
answers but for the sake of statistical validity and getting
different views it was critical to obtain two or more views.
In most cases this was a successful strategy. When it
failed to get a second informant, the researcher made a
follow-up call to the initial informant and further
explained the need for a second informant. In most cases,
this was a successful follow-up strategy.

As shown in Table 3.2, the response rate can be
calculated in a couple of ways. When calculated as a
percentage of the total initial sample, approximately 45% of
firms yielded useable responses. A better method is to
eliminate all firms who really weren't really eligible for
the sample anyway - those who weren't using telemarketing or
where no contact person was available for interviewing.
Approximately 65% of these eligible firms participated.
This rate falls about midway between response rates reported
by Dillman (1978) and Assael and Keon (1982). The real
consideration though is potential for response bias. The
major bias that can be seen from the response figures is a

probable underepresentation of firms who have discontinued

telemarketing. A total of 59 companies could not

participate because the initial contact was not there and no

other contacts were available. Many of these 59 companies

are likely to be firms that have discontinued telemarketing.

In fact, a large number cf the companies indicating tu t our

contact person no longer worked with the company, also

reported that they no longer used Phone Power. Others

indicated thay had never used telemarketing in the first

place. It is exceedingly difficult to include companies who

have discontinued an innovation in a research sample. Not

unexpectedly, they tend to be'less interested in the

research and often those most closely associated with the

innovation may have moved on to other employment.

The Telephone Interviews

In designing the study, it was decided that interviews

as opposed to a mailed questionnaire were preferable for

data collection because:

(a) Many questions required probing and respondent feedback

to determine which branch of a question to continue with;

(b) An interview was necessary to locate initial informants

and to get referrals for second and third informants. It

would be more difficult to obtain more than one type of

informant in this study via the mail;

(c) The entire universe of firms who had adopted the
innovation was so small, that the risk of high non-response
associated with mailed out questionnaires was judged too
great. It was necessary to obtain a sample large enough to
test the proposed model and associated hypotheses.

Tyebjee's (1979) Journal of Marketing review of
telephone survey methods suggested that cost and time are
two major advantages of telephone interviewing.
Opportunities for control are greater than with personal
interviews and mail out questionnaires. He also reported
overall comparability of results except that personal
interviews provide more depth of response than telephone
interviews. His assessment dealt primarily with situations
in which a member of the household is the main respondent.
This study required interviewing of key informants or what
Yin (1979) calls "elite interviewing". Yin's conclusion was
that telephone interviewing offered cost advantages
primarily. He argued that response rates and accuracy of
information were not different between personal interviewing
and telephone interviewing. Personal interviews allow for
collection of the greatest amount of data.

The cost factor primarily dictated use of a telephone
interview as opposed to personal ones. As well, it was
thought that since these firms were telemarketing
innovators, they would have a high familiarity in using the
telephone for selling and other potentially complex

interactions. A telephone interview might even be preferable for this group due to the time saving when compared to a personal interview.

Interviewer Training. Five telephone interviewers were hired to conduct the interviews for the study. Three of the five were employed full-time and had previous telephone interviewing experience including census interviewing and market research interviewing.

All were trained for two days by the researcher. One day was spent in four areas: (1) the purpose of the study (2) the telemarketing technology (3) the type of firms in the sample (4) interviewing techniques. The remaining time was spent learning and reviewing the actual interview schedule and doing practice interviews.

Operationalizing the Variables

The constructs measured in the study were operationalized via an interview schedule administered to the key informants in the telephone interviews. The researcher began instrument development procedures by adapting previously used established measures (where available) to the telephone interview format. This involved major adaptations because previously used instruments were not developed for use with sales organizations or for telephone interviews. After a preliminary instrument had been developed, the researcher had it evaluated by a field

2

1.0

1.1

1.25

2.8

3.2

3.6

4.0

2.5

2.2

2.0

1.8

1.4

1.6

researcher and sales manager directly involved with telemarketing in the field. On the basis of this evaluation, wording in the instrument was altered to conform more closely with terminology used by the targetted sample. After this stage, five pre-test interviews were conducted so that the instrument could be successfully used over the telephone with the target group. Three interviews were conducted with sales personnel and two with actual telemarketing users. The interview was pretested using both the researcher and others as interviewers. Two of these interviews were taped so the interviews could be analyzed in detail and changes made to the interview schedule. After these tests, the interview schedule was shortened from 40 to 30 minutes. A copy of the interview schedule is found in Appendix B along with guides supplied to the interviewers to handle issues that might come up during the interviews in Appendix C. Measurement of the five types of variables introduced in Chapter 2 is discussed below:

(1) Organization Structure Variables

(2) Management Support Variables

(3) Implementation Process Variables

(4) Organization-Innovation Match Variables.

(5) Success Variables

Centralization

Hage and Dewar (1973) used an index of centralization composed of four questions to measure the extent of participation in decision-making. This index was also used in the Hage and Aiken 1967 and 1970 works, in combination with a five item hierarchy of authority scale. Dewar, Whetten and Boje (1980) assessed the reliability and validity of these scales.

Dewar, Whetter and Boje (1980) took the Aiken and Hage data and data collected by Whetten in 1973 and assessed the reliability of the centralization scale using the Cronbach alpha coefficient (Nunnally, 1979). They then determined the convergent and discriminant validity by examining median interitem correlations. Cronbach Alpha reliability coefficients for both the centralization-participation and centralization-hierarchy scales were very good in all data sets (α =.81-.95 for centralization-participation scale, α =.70-.96 for centralization-hierarchy scale). Convergent and discriminant validity were also fairly high, although the authors suggest that reliability and validity could be improved by elimination of inconsistent referents (some items use "I", some "we", "a person", "the organization" and so on).

In addition, seven of the items do not
specify a referent. Because of these
inconsistencies, the questions could
have been interpreted to refer to a
single person, a work group, a
department, or the entire organization.
This is, of course, a serious problem
if the organization is the unit of
analysis and persons are used as
informants to describe its properties
(Dewar, Whetten and Boje, 1980: 124).

The difficulty with using the Hage and Aiken

centralization-participation scale as noted by Dewar, et.

al., is particularly relevant to this study. Because of

inconsistencies in referents, scores would depend on _who_ the

respondents are. In this study, one respondent from each

firm was at the strategic level, the other at the

implementation level. Inconsistencies in referents would

cause serious problems in determining decision-making power

in the firm.

Moch and Morse (1977) used a key informant type of

methodology to measure centralization by constructing an

index based on responses from two hospital officers. They

constructed an index based on who made hiring, supply

acquisition, and equipment purchasing decisions. High

scores were given to organizations where key informants

reported that all decisions were made by the hospital board,

low where decisions were made by heads of medical

departments. Zmud (1982) followed a similar approach by

summing responses indicating the location of decision

responsibiltiy for eight common activities. This approach was adapted here.

In this research, centralization was measured by summing responses indicating the location (sales reps, district/regional sales managers, national sales manager or vice-president, president or head office) of decision responsibiltity for five common activities: decisions about product price, hiring, time allocation, quotas, and performance criteria. The five questions used are numbered 43 through 47 in the questionnaire.

Complexity

Two dimensions of complexity - division of labour in the salesforce, and differentiation of the sales organization were measured in a manner consistent with measures used by Beyer and Trice (1979). Division of labour was measured by the number of job titles in the salesforce; differentiation was measured by the number of subunits. The third dimension of complexity, professionalism is usually measured by items indicating the education and professional activities of organization members. The original interview schedule developed for this study included such a measure. However, due to unsuccessful pretest results, the measure was dropped. Key informants found it difficult to report on education and professional activities for the salesforces involved. Questions 6, 8 and 9 were used to measure

division of labour and questions 3 and 7 measured differentiation.

Formalization

The degree of formalization has been measured in a number of ways ranging from Inkson et.al.'s (1970) simple count of the number of specific role-defining documents) to Hage and Dewar's (1973) five questions on extent of job codifications and rules. Implicit in most conceptions of formalization is the presence of written rules and procedures. The Beyer and Trice (1979) approach was to ask key informants to report on the extent of rules and regulations in their subunits. Zmud (1982) presented a list of tasks to respondents, and counted the tasks on that list for which informants indicated that standards existed. This approach was adopted here. Formalization was measured by: (1) the existence of a written sales manual (score 2 if a detailed written sales manual existed, 1 if sales manual is very general, 0 if no sales manual existed); (2) the extent of written guidelines for four sales tasks (count 1 if guidelines existed for each of the tasks). Questions 41 and 42 in the interview schedule were used for this measure.

Management support of change and management support of telemarketing were probably the most difficult constructs to measure in the study. Interest is on support at the time of adoption or just before adoption; this required recall on the part of respondents. Because these variables are thought to be very important in affecting the implementation of the innovation, measures were developed to try to offset the recall problem as much as possible. Firstly, use of multiple key informants was an attempt to increase reliability. As well, questions were formulated as objectively as possible. For example, informants were asked whether their organizations had a history of adopting new sales practices. It is assumed that a history of adopting new sales practices is a behavioural reflection of positive attitudes toward change on the part of management. Others who have used key informant methodology (Phillips, 1981) have stressed the advantages of asking fairly objective questions to increase reliabilty and validity of key informant reports. Thirdly, the entire questionnaire was structured to reconstruct the entire time sequence. Section one asked respondents to forget how they currently felt about telemarketing and go back to the time before its adoption. The second section dealt with telemarketing adoption and events concerning first use. This procedure appeared to have the desired effect as it was not uncommon

for respondents to preface their answers with a comment to the effect that their current attitudes were different than how they had felt at the time of adoption.

Support of Change

Two measures of attitudes toward change: (a) the Hage and Dewar (1973) index of values favorable toward change and (b) the Trumbo (1961) measure of employee attitudes toward work-related change were found in the literature. Neither scale is appropriate to the telephone interview situation or the purpose of this study.

Two questions - 10 and 11, asked management to evaluate their old selling ways and describe their need for change at the time they adopted telemarketing. As well, an Evan and Black (1980) measure was adapted (question 48), which measured the sales unit's past support for and past behaviour in adopting innovative sales practices. Lastly in question 12, informants were asked to rate the extent of support of change among the sales reps. Items 10, 11, and 48 were summed to give an overall measure of management support for change. Question 12 measured sales rep support for change.

Support of Telemarketing

Management support of telemarketing was measured by four items - questions 13, 14, 16, and 20. These questions asked informants to report management cost/benefit evaluations of telemarketing, management evaluations of the effect of telemarketing on customer relationships, and overall support for telemarketing by management at the time of adoption. (Note that in the questionnaire, the nature of the seven point scale is explained for respondents). Two additional items (questions 15 and 17) specifically measured sales rep support of telemarketing. These questions asked informants to report sales representatives' appraisals of the effect of telemarketing on customer relationships and cost/benefit evaluations. Scores were summed to get overall measures of management and sales rep support of telemarketing.

Innovation-Implementation Variables

Ginzberg (1979) developed a questionnaire to measure the quality of the implementation process for implementing MIS projects. To develop the questionnaire, he extracted a list of the issues requiring resolution from the planned change literature then constructed an instrument composed of 71 items measuring these issues. Respondents were asked to describe how well each item described change in their organization. For each respondent, a score was calculated

by subtracting the number of items for which a failure to resolve the issue from that for which favorable issue resolution was indicated. A 71 item instrument was too long to utilize in a telephone interview. It would even have been too long to include in a mail out questionnaire. A shorter 40 item version was pre-tested but respondents found the items difficult to understand and the 7 point scale used by Ginzberg too difficult. However, the original idea of selecting items to correspond to issues involved in successful change was used.

Four general issues appear important from the change theory literature and the Ginzberg study: (1) establishing goals and plans for the innovation, (2) making certain that the target has the ability and motivation to carry out the change, (3) diagnosing and dealing with resistance to change, and (4) evaluating the change.

The theory suggests that companies who resolve each of these issues experience a higher quality of implementation than firms who do not. Twelve items were scored and summed to reflect the process.

To measure whether companies had set goals and developed plans for telemarketing, they were asked whether several statements (questions 21 and 26) were true for their organization. For each item, a score of zero was assigned to false answers, one to true answers. To measure whether

management had ensured that the target group was motivated
and able to carry out the change; four items (35, 37a, 37b,
and 38) were used. The organization scored zero if no
training or only on the job training was given. One was
assigned to companies using Phone Power seminars only, and
two to companies who have special company provided training.
Zero was assigned to companies who did not explicitly
measure performance of telemarketing activities in assessing
performance. Zero was assigned to companies that did not
utilize an incentive pay system for telemarketing
representatives. Zero was assigned to companies that did
not set up some sort of special or dedicated facility or
arrangement for telemarketing reps to do their work, one to
companies that did. Five items (22, 23, 24, 25, 40)
measured whether they had diagnosed and handled resistance
to change. For items 22 and 23, a true response indicated
lack of diagnosis of possible resistance to change. True
responses scored zero and false responses, one. True
responses in items 24 and 25 are indicative of planning for
resistance and score one. Companies experiencing resistance
who took no steps to overcome it, scored zero; companies
that took positive steps, scored one. Evaluation was
measured by question 27. Companies that had done an
evaluation of telemarketing scored one, those that had not
scored zero. The overall measure is heavily weighted to
handling resistance to change because this aspect of the
change process has been judged as so important in the

literature.

<center>Innovation-Organization Match Variables</center>

Core Application

Yin (1978) suggested that an innovation covered a core application if it displaced some existing function in the organization. Because this concept offers a high practical potential for recommendations to both adopters and marketers of telemarketing, this study operationalized core application in a variety of ways. The conceptual definition suggested two possible measurements, both are used in the present research.

The existing core function of a salesforce is primarily to sell and maintain accounts. The tasks associated with this function are traditionally carried out by field sales reps in industrial firms. The first approach to measuring how much the innovation is used for core applications is simply to measure the extent of change in work routines of outside sales reps. If the innovation displaces work previously done by the outside sales force, it is covering a core application. Question 31 was the first measure of core application.

The second approach to measuring the extent to which the telemarketing innovation is used for core applications is to count the proportion of core application tasks that

are performed via telemarketing. The issue here is to classify tasks as core application tasks and non-core application tasks. Each task in the personal selling process could be considered a core task of the salesforce. Therefore, if telemarketing is used for these tasks after adoption, it has displaced an existing function. The number of these tasks that are performed via telemarketing is a measure of extent to which core selling tasks have been displaced by telemarketing. This measure of core application was calculated from question 28.

Compatibility

Compatibility is a measure of how consistent or similar telemarketing is to past selling practices and routines. Telemarketing is more compatible to firms that (1) had an inside order desk prior to telemarketing adoption, and (2) reported higher use of the telephone in selling prior to telemarketing adoption. A compatibility scale was constructed from questions 3, 5, and 28. Companies with no inside order desk scored 1, those with an inside order desk, 7. Question 28 was used to calculate whether the telephone was given as first mention for how a selling task was performed prior to adopting telemarketing. Zero was assigned to firms reporting no first mention of telephone as the method for performing any task, 4 was assigned to firms giving one first mention to the telephone, and 7 to firms reporting that the telephone had been the

method for performing two or more tasks. The compatibility

scale was constructed by summing all three items.

The Success Variable

Sales management researchers have long faced the

problem of measuring performance of individual sales reps.

Generally, some measure of hard performance numbers is

considered ideal - for example, sales or profit. The

problem with this measure is that it does not account for

differences in territory potential and workload. As Cravens

and Woodruff (1973: 242) argue:

> Since the salesman is only one of many factors
> influencing sales volume or sales-based ratios
> measure sales territory performance rather than
> salesman performance unless standards are
> adjusted for factors beyond the salesman's
> control.

Similar problems occur in trying to measure performance of

telemarketing by measuring sales attributable to it. An

additional problem is the difficulty of obtaining data from

firms on incremental sales attributable to the telemarketing

function. Telemarketing is often a sales support function

and it becomes very difficult to claim that any increment in

sales is a direct result of telemarketing.

Other common measures (Steers, 1975) have obvious

limitations: (a) productivity or efficiency suffers from

the problem of getting accurate data and measuring

efficiency; (b) employee satisfaction is just one aspect of

performance and may not be a key one; (c) profit doesn't take account of varying company situations and varying goals for telemarketing; and (d) turnover or absenteeism data again measures only one small aspect of what most would consider performance.

The major dependent variable - success of telemarketing implementation was measured in five ways. Three perceptual measures: (1) perceptions of success, (2) goal attainment, (3) evaluations of whether the use of telemarketing has increased or decreased; and two behavioural measures, (4) continuance/discontinuance, and (5) routinization were used.

Perceptions of Success of Telemarketing

Measuring success through perceptions of success has been an approach adopted by those who have researched new product success (Cooper, 1979a 1979b) and those who've tried to measure success of OR/MS implementations (Ginzberg, 1979; Zand and Sorenson, 1975). Cooper (1979) asked managers to identify two ventures - one a commercial success, the other a commercial failure. Success was evaluated by comparing a product's profitability with some minimum acceptable profitability for that type of venture. In OR/MS studies, a common measure of success of implementation is user satisfaction with the system (Ginzberg, 1975).

In this study, each informant was asked to rate

overall success for his/her organization (question 49).

Goal Attainment

The extent of achievement of goals has been a fairly common method for measuring organizational effectiveness (Cunningham, 1977; Goodman and Pennings, 1977). Reimann's (1982) longitudinal study of 20 manufacturing organizations found that managers' evaluations of how well their organizations were performing along eight criteria were accurate predictors of actual performance over the next 9 years.

Two approaches to goal attainment evaluation were possible. The first approach was to ask organizations to specify their goals for a project, then ask for appraisals relative to each goal. The problem with this approach is the inability or at least difficulty of most organizations to clearly specify their goals (Cunningham, 1975). A second approach was to pre-specify criteria and ask for evaluations on each of these. The problem here is to specify appropriate criteria applicable to all telemarketing applications.

The approach taken in this research was to provide a list of possible tasks with which the telemarketing operation could be charged. Respondents were asked to select tasks performed by telemarketing reps in their

organization from this list. Then each respondent was asked
to indicate the success of the telemarketing unit in
performing each task (question 26). The mean of these
evaluations measured goal attainment.

Telemarketing Increase/Decrease Evaluation

The innovation adoption literature suggests that
discontinuance may follow the adoption decision if the user
is not successful with the innovation. For instance, a firm
may adopt telemarketing at time 1 for purposes A and B. At
time two, that firm might decrease the staff allocated to
telemarketing or alternatively, it might increase staff:

A	B	C	D
Increase Telemarketing Operation Since Time Of First Implementation.	Maintain Telemarketing Operation at Same Level As Time of First Implementation.	Decrease Telemarketing Operation Since Time of First Implementation.	Discontinue Telemarketing Entirely

Points A and B are considered to be indicators of increase
and/or continuance, C and D of decrease or discontinuance.
In this research, discontinuance or decrease is seen as a
strong indication of failure of the innovation and
continuance or increase as an indication of its success.

One difficulty is that discontinuance or decrease
could occur if a firm discovers that the innovation was not
an appropriate one for it. However, all firms in the sample

that had discontinued telemarketing had used it for a
minimum of six months. It was thought that most firms who
had made a rejection decision because the innovation was not
an appropriate one for them, would have discontinued after
the initial three month contract period; although, there is
probably some noise in this measure.

For the third perceptual measure of success,
respondents were asked to report whether use had increased
or decreased in their organization since they first adopted
it (question 34).

Continuance/Discontinuance

The same logic developed in the third measure is
applied here – salesforces experiencing success are likely
to increase or at least continue telemarketing use since the
time of first adoption; those experiencing less success
would discontinue or decrease its use. Although similar to
the third measure, this measure is a behavioral one –
measuring whether the actual number of telemarketing sales
reps increased, decreased, or was reduced to zero (questions
32 and 33).

Routinization

Yin (1979) defined routinization as the process by
which new practices become integral parts of organizations.
When an innovation has become so well integrated into the

organization that it really is no longer seen as an innovation, this is the ultimate in success of that innovation. In his study, the degree of routinization of 19 innovations was summarized in terms of a routinization score, based on the number of conditions (out of ten) achieved by each innovation.

Critical aspects of routinization are continued operation of the innovation at a meaningful level and evidence that it has been integrated into the organizational system. In this study, routinization was measured by four items:

(1) presence of telemarketing reps now (question 33),

(2) presence of a supervisor for the telemarketing staff (question 33),

(3) presence of a manual to guide telemarketing representatives (question 39), and

(4) telemarketing defined as a major part of employee's jobs (question 36).

Lastly the control variable, size, was measured by the number of company employees and company sales. The telemarketing adoption date was measured as the date the firm bought the Phone Power program from Bell. Data for both these variables was obtained from Telecom Canada records discussed earlier.

Summary

This chapter has outlined the steps followed in operationalizing the model constructs and in collecting the data. Data analysis procedures, and statistical results obtained from testing the research model are reported in Chapter 4. The initial model is examined, evaluated and revised.

CHAPTER 4 - DATA ANALYSIS AND FINDINGS

Structural equation modeling as implemented by the
computer program LISREL (Joreskog and Sorbom, 1983) was used
to test statistically the proposed hypotheses and estimate
the model. Before presenting the detailed equations used to
estimate the LISREL model, it is helpful: (a) to present
the LISREL model in diagrammatic form and outline why a
causal modeling technique was used, (b) to describe how
several key measurement issues were handled, and (c) to
briefly describe the sample and indicator variables.
Following these three sections, the measurement and
structural equations are presented, LISREL analysis
procedures are outlined and results are given. Lastly,
improvements to the initial model are made and the revised
model is presented.

The LISREL Path Diagram

LISREL is only one of several routines for parameter
estimation in covariance structure analysis; but it has been
the most frequently used in marketing (Fornell, 1983).
Figure 4.1 illustrates the full LISREL model incorporating
the latent variables from Figure 2.2 and the indicator
variables used to measure them. (Following Joreskog and
Sorbom (1983) squares are used to represent observed
variables and circles to represent latent unobserved
constructs). In employing causal modeling, the objective is

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to hypothesize a measurement model linking indicator variables to latent variables, and a particular cause-effect pattern of relations between the latent variables. Then the researcher determines whether the correlations obtained among the indicator variables (calculated from the data) are consistent with this model.

A total of 34 indicator variables were used to estimate the model. For example, the resolution of implementation issues scale was administered to both strategic and implementer key informants. This yielded two variables or indicators - a strategic measure of resolution of implementation issues and an implementer measure of resolution of implementation issues (SRI and IRI). As can be seen from Figure 4.1, there are ten indicators of success (labelled SUC), four of core use (labelled CUI) and two indicators for each of the other nine constructs. These indicator variables are all described in Chapter 3.

To assist in reading the figures, the key for the abbreviations used for all constructs is given below (n variables are listed first, followed by the E variables):

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MST - management support of telemarketing
RII - resolution of implementation issues
RST - sales representatives' support of telemarketing
SUC - success
CEN - centralization
FOR - formalization
DIF - differentiation
DIV - division of labour
CUI - core use of the innovation
```

MSI – management support of innovation
RSI – sales representatives' support of innovation
COMP – compatibility

The convention adopted here was to affix the letter S to the beginning of all strategic measures and the letter I to all implementer measures. For example, SRI and IRI refer to the strategic and implementer measures of the resolution of implementation issues construct respectively; SOS and IOS refer to the strategic and implementer measures of overall success, and so on. The key for the abbreviations used for all indicator variables is:

MST – management support of telemarketing
RI – resolution of implementation issues
RST – sales representatives' support of telemarketing
OS – overall success
MS – mean goal success
CT – increase or decrease in number of telemarketing reps
AC – views about whether the use of telemarketing had increased or decreased
RN – routinization
CE – centralization
FO – formalization
DIV – division of labour
DIF – differentiation
ACT – number of core tasks for which telemarketing was used
RCH – extent of change in work routines of outside reps
MSI – management support of innovation
RSI – reps' support of innovation
COM – compatibility
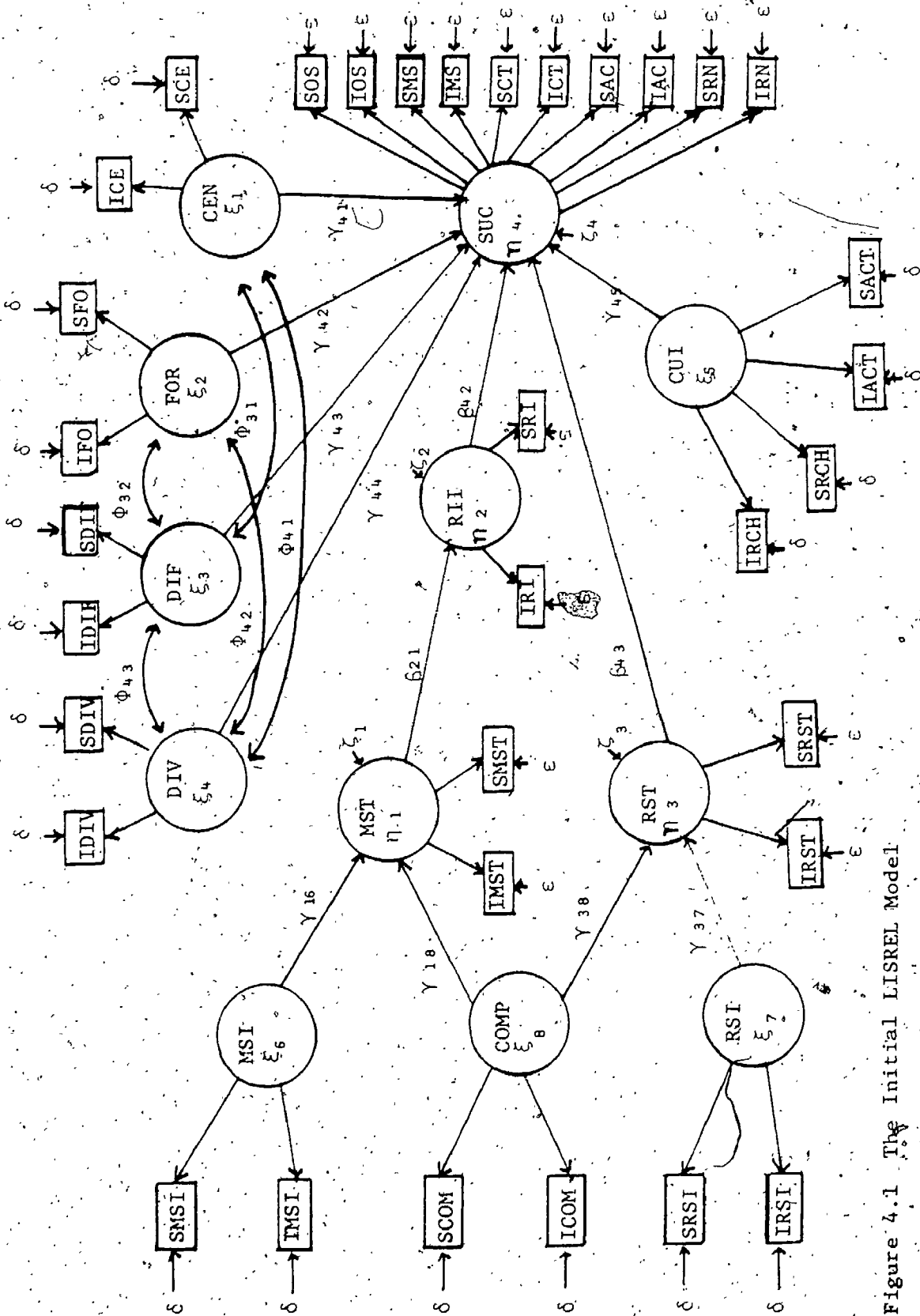
Figure 4.1 The Initial LISREL Model

Why Use a Causal Modeling Technique?

The model formulated for the study (although grounded in a strong research tradition) is fairly exploratory and one could argue that a causal modeling technique (as implemented by LISREL) is being used somewhat prematurely. However, there are three major offsetting advantages for using the LISREL technique.

The primary advantage of LISREL over a standard path or regression analysis in the present study, is its power in analyzing a model with multiple indicators of the latent variables. LISREL provides "the most complete solution to the estimation problem of structural models" (Kenny, 1979, 162), particularly where the research involves testing a causal model in which it is assumed that the latent variables cannot be measured perfectly. Path analysis is predicated upon three major assumptions: (1) the variables are measured without error, (2) the residuals are not correlated and (3) the causal model is recursive. These assumptions are rarely met, especially in nonexperimental social science research. A basic assumption of this researcher is that perfect measurement of many constructs used in marketing research is not possible. In particular, perfect measurement of the constructs in this research model was not likely to be achieved by any one means. (In this study, as described above, at least two measures were obtained for each construct). Although this assumption may

appear to be a truism, it represents a major departure from
many past studies in which constructs were assumed to be
perfectly operationalized by the indicators designed to
measure them.

Second, as Kenny (1979) has argued, one commonly
accepted approach toward establishing useful causal
relations involves careful study of cross-sectional
relationships exactly as proposed here. The technique of
causal modeling forces the researcher to specify
relationships and assumptions clearly. In the logical chain
of this research stream, cross sectional type of research
would be followed by time-lagged studies and then
experiments where causal variables are manipulated so that
greater confidence can be placed in the causal aspect of the
findings. (The other major approach suggests that causal
relationships should first be tested under experimental
conditions to see whether they exist at all. This approach
is less appropriate for the current model as it would be
very difficult to design an experiment to test it).

Third, because the theory surrounding each individual
variable in the model was fairly well developed (the overall
combination of the constructs into the model was new), it
was decided that the theory development justified the use of
LISREL. Precedents in using LISREL to analyze theory at a
comparable stage of development were provided by Phillips
(1982) who analyzed inter-firm power relationships in

marketing channels, and John and Martin (1984) who looked at the effects of organization structure and credibility on marketing planning.

Measurement Issues

Number of Key Informants Interviewed

In rejecting the assumption of perfect measurement of model constructs, an important goal of the thesis was to obtain at least two measures (two key informant reports) of each construct in the research model. Specifically, at least one strategic informant measure and one implementer informant measure was sought.

Useable interviews were completed with one hundred and thirty-nine companies. Of these, four informants were interviewed in three companies, three informants were interviewed in seven, two in one hundred, and one in twenty-nine. All companies where two or more informants were interviewed yielded sufficient data to estimate the LISREL model. The twenty-nine companies with only one key informant were excluded from the present analysis because insufficient measures were obtained.

Data reduction was necessary (to achieve consistency across the sample) for companies where three and four informants were obtained. There are two reasonable alternatives for handling this reduction. In the Phillips

(1981) tradition, responses could be averaged so that a mean strategic response and/or a mean implementer response are analyzed. In this research, the researcher eliminated third and fourth interviews so that only two informants were analyzed for every case. Two criteria for eliminating and retaining respondents were used: (1) participation in the adoption decision and (2) length of time with the company. To illustrate how these criteria were applied, consider a three informant company with two implementer responses. In choosing which respondent to retain, the researcher first determined whether the respondent had participated in the innovation adoption decision. This criterion was applied in selecting key informants but occasionally a key informant was recommended who had not been involved in the adoption decision - for example, a telemarketing manager (implementer) who was not with the company when the adoption decision was made. A respondent who had participated was retained in favor of one who had not. In cases when both had or had not participated in the decision, the respondent who had been with the company for the longest period of time was retained. These decision rules were designed to result in the most knowledgable persons being utilized as informants. This approach makes sense in view of Phillips' (1982) recommendation that researchers exercise great care and expend considerable effort in choosing the most knowledgable key informants possible.

In summary, the analysis, findings and conclusions which follow are based on two key informant reports for 110 companies.

Reliability of Measures

As the initial step in reliability analysis, the measures in the study which consisted of scales constructed from multiple Likert scale items were assessed for undimensionality. (As described in Chapter 3, the majority of constructs were not measured in this fashion). Cronbach's alpha was estimated for each scale and items were deleted if they detracted from the internal consistency. KR analysis was done for scales composed of dichotomous items (Churchill, 1979; Nunnally, 1978; Peter, 1979).

Results of this analysis are given in Table 4.1. Three of the five scales yielded acceptable alphas as originally formulated. Alphas in both the strategic and implementer scales measuring sales rep support of telemarketing and formalization were particularly high. The measures of management support for innovation and management support for telemarketing deserve special comment.

Table 4.1

Scale Internal Consistency Analysis

Scale	Number of Items In Original Interview	Number of Items After Analysis	Alpha Strategic	Alpha Implementer
(1) Centralization	5	5	.61	.65
(2) Management support for change	3	1		
(3) Management support for telemarketing	4	1		
(4) Reps' support for telemarketing	2	2	.88	.86
(5) Formalization	6	6	.86	.85

The reliability analysis on both management support for change and management support for telemarketing suggested that two dimensions were present in each scale (i.e. the alpha after deleting particular items increased significantly and item-total correlations were low for several items). As can be recalled from earlier measurement descriptions, reports of actual behaviours were incorporated into these scales along with attitude report items. This was done to alleviate the potential problem of respondents' recall of initial attitudes being contaminated by ensuing success or failure of telemarketing in the company. It was thought that reports of behaviour would be more objectively

recalled.

When the reliability analysis suggested that behaviour measures and attitude measures were two distinct dimensions, factor analysis (principal factoring with iterations) was performed. This analysis suggested that two factors were present in the management support of change scale and three factors in the management support of telemarketing scales.

Initial eigenvalues were greater than one for two factors in the management support of change scale - factor 1 eigenvalue = 2.0; factor 2 eigenvalue = 1.3. The varimax rotated factor matrix is reported in Table 4.2. Because principal factoring with iterations was used, resulting eigenvalues are different than the initial ones used to make the decision on the number of factors. The eigenvalues associated with the unrotated solution for management support of change are: factor 1 = 1.4, factor 2 = 0.7. The variables used to measure management support of change clearly fall into two clean dimensions. Factor 2 corresponds to respondent reports of whether the company has a history of supporting the adoption of new practices. This behaviour report appears to be quite different from attitude dimensions loading on factor 1.

Initial eigenvalues were also greater than one for three factors in the managment support of telemarketing scale - factor 1 eigenvalue = 2.5; factor 2 eigenvalue =

1.4; factor 3 eigenvalue = 1.2. The varimax rotated factor matrix is reported in Table 4.2. The resulting eigenvalues for managment support of telemarketing are: factor 1 = 2.1, factor 2 = 1.0, factor 3 = 0.5). The results of the factor analysis on management support of telemarketing also reveal that management behaviour (Question 20) loads on a separate factor.

On the basis of this analysis, the original measures of these two constructs were reformulated. The obvious choice is between using the attitude measures or the behaviour measures. The behaviour measures were selected for several reasons.

First, since they are reports of behaviours instead of attitudes, they are less likely to have been influenced over the passage of time by the results of the innovation. Secondly, the literature suggests that management support of an innovation is critical. This is reflected in the behaviour dimension which asks informants to report on the extent of management support in terms of resource allocation. Lastly, the major disadvantage of opting for the behaviour measures is that one is left with a single item measure of these two constructs - a situation that is not entirely satisfactory. However, if the attitude

Table 4.2

Factor Analysis of Items in the MSI and MST Scales
Varimax Factor Matrix: Management Support of Innovation

	Factor 1	Factor 2
Question 10 – strategic attitude report	.473	-.040
Question 10 – implementer attitude report	.597	.164
Question 11 – strategic attitude report	.593	.070
Question 11 – implementer attitude report	.528	.319
Question 48 – strategic behaviour report	-.312	.670
Question 48 – implementer behaviour report	-.221	.365
Eigenvalues	1.4	.7
Communality	.2	.4

Varimax Factor Matrix: Management Support of Telemarketing

	Factor 1	Factor 2	Factor 3
Question 13 – strategic attitude report	.052	.439	.070
Question 13 – implementer attitude report	.881	-.050	.114
Question 14 – strategic attitude report	.133	.884	.063
Question 14 – implementer attitude report	.529	.314	.109
Question 16 – strategic attitude report	.014	.301	.353
Question 16 – implementer attitude report	.735	.133	.211
Question 20 – strategic behaviour report	.081	.044	.497
Question 20 – implementer behaviour report	.212	.042	.541
Eigenvalues	2.1	1.0	.5
Communality	.2	.8	.8

dimension questions were used, only two items would have measured support of change and three would have measured support of telemarketing. As well, the use of two key informants in this research provides for an additional reliability check not available in many studies.

The items measuring management <u>attitudes</u> to telemarketing were used to test H1. As outlined earlier, in H1 the effect of centralization is hypothesized as being contingent on whether the organization is in favor of the innovation. The items measuring attitudes to telemarketing were an appropriate reflection of whether the organization was in favor of the innovation.

In conclusion, for the present analysis, management support of innovation was measured by question 48 and management support of telemarketing was measured by question 20. In future analysis and research, one could reformulate the model, hypothesizing that management attitudes to telemarketing (questions 13,14, and 16) would positively influence management support of telemarketing (question 20). This reformulation makes good sense theoretically as attitudes are commonly viewed as preceding behaviours.

At this stage, the researcher has not reformulated the model for the current study. A basic tenet of causal modeling is that a model is advanced a priori, tested and then suggestions are made for theory development and model

redesign. A model incorporating these revisions would most appropriately be tested on new data. As well, because the model is already very large, it was viewed as inappropriate to try to estimate two additional contructs.

However, the researcher did some preliminary correlation analyses which suggest that this might be a fruitful future step. As expected, all correlations between management attitudes to telemarketing and behavioural support of telemarketing were positive and significant, even though they were fairly low. (See Appendix D for these correlations).

A second measure of reliability was provided by inter-rater correlations. Because two informants responded in 110 firms, the sample for calculating the inter-rater correlations was large. These correlations are given below, in Table 4.3 and are generally very satisfactory. They range from .764 to .296. Overall, inter-rater reliability was excellent for the success variables and the more objective variables such as centralization, formalization, differentiation and division of labour. The lowest reliabilities were found in the constructs measuring management support of telemarketing and innovation. However, all correlations are significant at or beyond the .001 level of probability. Further evidence of measurement reliability and validity will be given in the report of the LISREL analysis of the data.

Table 4.3

Inter-Rater (Strategic and Implementer) Correlations for the
Model Measures*

(1) Success

    (a) Perception of overall success   .562
    (b) Goal attainment   .590
    (c) Continuance/discontinuance   .607
    (d) Attitudes re: continuance/discontinuance   .584
    (e) Routinization   .619

(2) Centralization   .588

(3) Formalization   .619

(4) Complexity

    (a) Differentiation   .764
    (b) Division of labour   .752

(5) Core application   .621

    (a) Changes in reps' routines   .497
    (b) Core use   .621

(6) Management support of change   .337

(7) Reps' support of change   .338

(8) Compatibility   .433

(9) Management support of telemarketing   .296

(10) Reps' support of telemarketing   .514

(11) Resolution of implementation issues   .470

* All are significant at or beyond .001 level of probability.

Sample Description

The majority of companies included in the sample were small to medium in size with a median of 60.5 employees and median sales of 15 million dollars per year. All of the company informants were interviewed between 10 and 39 months from the time of adopting telemarketing. The companies were all in the wholesale/distribution and manufacturing sectors but the type of products sold varied from packaging and art supplies to computer and electronic equipment. Paralleling this variation in products was a wide range in product price. Product prices ranged from one dollar to millions of dollars. The median price was $900. It would have been preferable to limit the study to one industry sector but this was not possible given the low numbers of companies who had adopted the innovation in any one sector.

Table 4.4 shows correlations between three control variables – months since adoption, product price (both strategic and implementer measures) and size with the variables in the model. Recall that months since adoption and size measures were collected from the sampling frame so there is only one measure of each. (To assist in reading this table, intuitive abbreviations of variable names have been used).

Preliminary analysis suggested that these variables had no overwhelming significant effects on the variables of

interest in the model - including success. Exceptions were that size was consistently significantly correlated with formalization and complexity of organization structure. This is not surprising as it makes logical sense that larger organizations are more complex and formal, and supports earlier findings reported in the literature. As well, there is a general negative correlation between firms selling higher priced products and compatibility of telemarketing. This correlation analysis implies that firms selling higher priced products have used the telephone less in their previous selling practices. This finding will be incorporated into the interpretation of study findings in Chapter 5. As well, there is a slight tendency for price to be negatively correlated with a few measures of success. However, out of 20 possible correlations, only 3 are significant at at .05 and these are small in magnitude so the effect of price was not modeled for the purpose of this study.

Table 4.4

Correlations Between Control Variables and Model Measures*

	Months Since Adoption	Product Price (S)	Product Price (I)	Size
S mgt support of tm	-.073	-.095	-.097	-.031
I mgt support of tm	.057	.025	-.076	-.191
S resolution of issues	.061	-.079	.036	.064
I resolution of issues	.068	.064	.070	-.078
S reps support of tm	.049	-.005	-.177	-.049
I reps support of tm	.171	.049	-.122	-.115
S overall success	.038	-.018	-.099	.073
I overall success	-.017	-.123	-.094	-.100
S mean success	.093	-.260	-.187	.050
I mean success	-.031	.051	-.218	-.023
S use of tm up or down	-.004	.041	-.127	-.006
I use of tm up or down	-.151	.009	-.135	.006
S views on use of tm	-.125	.087	-.147	-.069
I views on use of tm	-.079	.128	-.115	.021
S routinization	-.013	-.006	-.056	.172
I routinization	-.138	.089	-.016	.111
S centralization	.070	.012	-.119	-.095
I centralization	-.032	-.175	.168	-.014
S formalization	.172	.218	.140	.244
I formalization	.175	-.015	-.041	.467
S differentiation	-.064	.104	.338	.452
I differentiation	-.102	.125	.441	.438
S division of labour	.032	.109	.155	.390
I division of labour	.129	.023	.251	.335
S core task use of tm	.046	-.125	-.178	-.012
I core task use of tm	.017	-.098	-.213	-.147
S change in reps work	-.115	.063	.069	-.066
I change in reps work	.045	.031	.061	-.134
S mgt support innov	-.121	.062	-.049	-.153
I mgt support innov	.085	-.020	.013	.052
S reps support innov	.085	-.152	-.188	-.015
I reps support innov	.169	-.006	-.085	-.044
S compatibility	-.024	-.080	-.303	-.062
I compatibility	-.072	-.257	-.256	-.078

* S = strategic measure
  I = implementer measure
  tm = telemarketing

Non-Response Bias

Data on company size, sales, geographical location,
adoption date and use of telemarketing were gathered from
the sampling frame so it was possible to check for
non-response bias by looking at whether firms in the sample
were different than non-respondent firms on any of these
dimensions. There appeared to be <u>no</u> differences between
respondents and non-respondents on any dimension except the
time since adoption. Somewhat fewer companies who had
adopted the innovation earlier were able to be interviewed.
In many of these non-response cases, the company had moved,
been sold, or persons involved with the adoption of
telemarketing were no longer employed by the company.

Measure Descriptions

The sample means, range and standard deviations for
each variable used in the model are given in Table 4.5.
Each group of variables will be briefly described below.

Table 4.5

Variable Means, Ranges and Standard Deviations

Variable	Mean	Range	Standard Deviation
Organization Structure			
S centralization	13.86	7-20	2.96
I centralization	13.75	5-20	3.36
S formalization	2.06	0-6	2.20
I formalization	1.86	0-6	2.16
S differentiation	5.82	1-51	5.27
I differentiation	6.19	1-26	3.96
S division of labour	5.29	1-11	2.35
I division of labour	5.40	0-12	2.32
Management Support			
S mgt support innov	4.54	1-7	1.67
I mgt support innov	4.73	1-7	1.50
S mgt support of tm	5.26	2-7	1.36
I mgt support of tm	5.41	1-7	1.49
S reps support of innov	4.06	1-7	1.75
I reps support of innov	4.05	1-7	1.67
S rep support of tm	7.58	0-14	3.33
I rep support of tm	8.21	0-14	3.62
Resolution of Implementation Issues			
S resolution of issues	7.87	4-13	2.29
I resolution of issues	7.61	3-13	2.27
Innovation-Organization Match			
S compatibility	12.75	3-18	3.28
I compatibility	12.79	4-17	3.24
S core task use of tm	6.56	1-10	2.29
I core task use of tm	6.66	1-10	2.45
S change in reps work	3.84	1-7	1.69
I change in reps work	4.04	1-7	3.24
Success			
S overall success	4.86	1-7	1.64
I overall success	4.86	1-7	1.63
S mean success	4.91	1-7	1.32
I mean success	5.13	2-7	1.21
S use of tm up or down	1.24	0-2	.78
I use of tm up or down	1.18	0-2	.74
S views on use of tm	1.41	0-2	.82
I views on use of tm	1.38	0-2	.77
S routinization	1.85	0-3	.94
I routinization	1.78	0-3	.90

Organization Structure

Overall, reasonably good dispersion of scores over all
eight measures of salesforce structure (strategic reports
and implementer reports on centralization, formalization,
differentiation and division of labour) were observed. In
general, the salesforces included in the sample tended to be
moderately centralized. The midpoint on the centralization
scale was 12.50 and the mean centralization scores for both
strategic and implementer informants was just slightly above
that. As well, the sales organizations tended not to be
very complex. The average number of job titles in the
salesforce (division of labour) was slightly more than five.
The average number of subunits (differentiation) was
approximately six. As might be expected in less complex and
fairly centralized sales organizations, relatively few
written rules and guidelines exist. The average on the
strategic formalization scale (0-6) was 2.06; the average on
the implementer scale was 1.86.

Management Support

Because this research focussed on a select group of
firms that had already adopted the innovation of interest,
one would expect that sales management would have exhibited
fairly strong support of innovation in general and toward
telemarketing in particular at the time the adoption
decision was made. The data support these expectations.

The average management support for innovation on a 7 point scale was 4.54 as measured by strategic informants and 4.73 as measured by implementer informants. The average management support for telemarketing was 5.26 (strategic measure) and 5.41 (implementer measure). Sales representatives exhibited <u>average</u> support for innovation (4.06 for strategic informants and 4.05 for implementer measures) and also about average support for telemarketing (7.58 for strategic informants and 8.21 for implementers on 14 point scales).

Resolution of Implementation Issues

Very good and approximately normal dispersion was also observed on the 13 point scale measuring the resolution of issues in innovation implementation. Firms appeared to perform moderately to moderately highly on this dimension with average scores of 7.87 (strategic measure) and 7.61 (implementer measure).

Compatibility of the Innovation

Telemarketing was found to be moderately compatible on average with past practices of sales organizations in the study. Strategic and implementer compatibility means (12.75 and 12.79) were both close to the scale midpoint of 12. Good dispersion was also observed on the compatibility measure, so there are a number of firms in the sample who had order desks and had used the telephone in an ad hoc

fashion before telemarketing, in selling and sales support.
There were also quite a number that had used the telephone
very little.

Core Use of the Innovation

On average, the adoption of telemarketing in these
companies resulted in a moderately high change in the work
patterns and routines for the outside sales reps. On a 7
point scale, the mean strategic score was 3.84 and the mean
implementer measure was 4.04. As well, on average,
telemarketing was used for about 6.56 (strategic measure)
and 6.66 (implementer measure) core sales tasks. Scores on
all four measures were approximately normally distributed.

Success

The general picture emerging from all ten success
measures is one of reasonably high success with
telemarketing. Reasonably good dispersion was achieved on
all ten measures of success. However, as is common in many
measures of success or satisfaction, the seven point
measures of overall success were skewed slightly upward with
means of 4.86 (strategic and implementers). The mean seven
point goal success measures exhibited the same tendency with
means of 4.91 (strategic measure) and 5.13 (implementer
measure).

Supporting these attitudinal measures, the majority of
firms had kept the same number of telemarketing reps (34.5%

strategic; 41.8% implementer) or increased the number (44.5%
strategic; 38.2% implementer). Only about 20% (implementer
measure) to 20.9% (strategic measure) had decreased the
number of reps or discontinued the telemarketing program
entirely. Very equal dispersion of scores was observed over
the four point routinization measure. About 25% of the
sales organizations had achieved very high routinization of
the innovation (28.2% strategic and 25.5% implementer). The
other sales organizations were approximately equally
distributed throughout the various states of integration or
routinization.

A major concern in designing the study was obtaining
participation by firms that had not been very successful
with telemarketing. These measures suggest that a fairly
high proportion of firms would fall at the less successful
end of the success continuum. About 20 percent of firms
rated success as less than four on the seven point overall
and mean goal success scales. Furthermore, about 20 percent
also said they had decreased or discontinued their use of
telemarketing since adoption. About 40 percent of firms
reported routinization scores in the bottom half of the
scale. Taken together, this data suggests that a good range
of telemarketing success was observed in the sample.

The LISREL Model

LISREL is a general computer program for estimating the unknown coefficients in a set of linear structural equations and for testing the overall fit of the proposed model to the data. The LISREL model assumes that there is a causal structure among a set of latent variables. These latent variables appear as underlying causes of the observed variables. Following from this, the LISREL model consists of two parts; the measurement model and the structural equation model. The measurement model specifies how the latent variables or hypothetical constructs are measured in terms of the observed variables and is used to describe the measurement properties (validities and reliabilities) of the observed variables. The structural equation model specifies the causal relationships among the latent variables and is used to describe the causal effects.

The Structural Equation Model

The structural equation model refers to relations among the exogenous and endogenous constructs or latent variables. The general form of the structural equation model is:

$$\eta = \beta\eta + \Gamma\xi + \zeta$$

- where η is an $m \times 1$ vector of latent <u>endogenous</u> variables;

- ξ is an $n \times 1$ vector of latent <u>exogenous</u> variables.

- β is an $m \times m$ matrix of coefficients of the effects of endogenous (η's) on endogenous variables (η's).

- ζ is an $m \times 1$ vector of residuals in the equations.

- Γ is an $m \times n$ matrix of the coefficients of the effects of exogenous variables (ξ's) on η's.

The matrix equations associated with the structural model are given in Table 4.6.

Table 4.6

Matrix Equations Defining the Initial
Structural Equation Model

$$
\begin{bmatrix} \eta_1 \\ \eta_2 \\ \eta_3 \\ \eta_4 \end{bmatrix} =
\begin{bmatrix} 0 & 0 & 0 & 0 \\ \beta_{21} & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 \\ 0 & \beta_{42} & \beta_{43} & 0 \end{bmatrix}
\begin{bmatrix} \eta_1 \\ \eta_2 \\ \eta_3 \\ \eta_4 \end{bmatrix} +
\begin{bmatrix} 0 & 0 & 0 & 0 & 0 & \gamma_{16} & 0 & \gamma_{18} \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & \gamma_{37} & \gamma_{38} \\ \gamma_{41} & \gamma_{42} & \gamma_{43} & \gamma_{44} & \gamma_{45} & 0 & 0 & 0 \end{bmatrix}
\begin{bmatrix} \xi_1 \\ \xi_2 \\ \xi_3 \\ \xi_4 \\ \xi_5 \\ \xi_6 \\ \xi_7 \\ \xi_8 \end{bmatrix} +
\begin{bmatrix} \zeta_1 \\ \zeta_2 \\ \zeta_3 \\ \zeta_4 \end{bmatrix}
$$

The Measurement Models

The measurement model specifies the relations between unobserved and observed variables.

Two equations describe this model:

(1) $Y = \Lambda_y \eta + \varepsilon$

y is a p x 1 vector of measures of dependent variables.

Λ is a p x m matrix of coefficients (loadings) of y on unobserved dependent variables (η)

ε is a p x 1 vector of errors of measurement of y.

(2) $X = \Lambda_x \xi + \delta$

X is a q x 1 vector of measures of independent variables

Λ is a q x n matrix of coefficients of x on unobserved independent variables

δ is q x 1 vector of errors of measurement of x.

The matrix equations associated with the measurement model for Y are given in Table 4.7. Those associated with the measurement model for X are in Table 4.8.

Table 4.7

Matrix Equations Defining the Measurement Model for Y

$$
\begin{bmatrix} Y_1 \\ Y_2 \\ Y_3 \\ Y_4 \\ Y_5 \\ Y_6 \\ Y_7 \\ Y_8 \\ Y_9 \\ Y_{10} \\ Y_{11} \\ Y_{12} \\ Y_{13} \\ Y_{14} \\ Y_{15} \\ Y_{16} \end{bmatrix}
=
\begin{bmatrix}
1 & 0 & 0 & 0 \\
\lambda_{21} & 0 & 0 & 0 \\
0 & 1 & 0 & 0 \\
0 & \lambda_{42} & 0 & 0 \\
0 & 0 & 1 & 0 \\
0 & 0 & \lambda_{63} & 0 \\
0 & 0 & 0 & 1 \\
0 & 0 & 0 & \lambda_{84} \\
0 & 0 & 0 & \lambda_{94} \\
0 & 0 & 0 & \lambda_{10\,4} \\
0 & 0 & 0 & \lambda_{11\,4} \\
0 & 0 & 0 & \lambda_{12\,4} \\
0 & 0 & 0 & \lambda_{13\,4} \\
0 & 0 & 0 & \lambda_{14\,4} \\
0 & 0 & 0 & \lambda_{15\,4} \\
0 & 0 & 0 & \lambda_{16\,4}
\end{bmatrix}
\begin{bmatrix} \eta_1 \\ \eta_2 \\ \eta_3 \\ \eta_4 \end{bmatrix}
+
\begin{bmatrix} \varepsilon_1 \\ \varepsilon_2 \\ \varepsilon_3 \\ \varepsilon_4 \\ \varepsilon_5 \\ \varepsilon_6 \\ \varepsilon_7 \\ \varepsilon_8 \\ \varepsilon_9 \\ \varepsilon_{10} \\ \varepsilon_{11} \\ \varepsilon_{12} \\ \varepsilon_{13} \\ \varepsilon_{14} \\ \varepsilon_{15} \\ \varepsilon_{16} \end{bmatrix}
$$

Ψ = diagonal $\theta\varepsilon$ = diagonal

PSI is the covariance   THETA EPSILON is the
matrix of ξ .   covariance matrix of
                               ε

Table 4.8

Matrix Equations Defining the Measurement Model for X.

$$
\begin{bmatrix}
X1 \\ X2 \\ X3 \\ X4 \\ X5 \\ X6 \\ X7 \\ X8 \\ X9 \\ X10 \\ X11 \\ X12 \\ X13 \\ X14 \\ X15 \\ X16 \\ X17 \\ X18
\end{bmatrix}
=
\begin{bmatrix}
1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
\lambda_{21} & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & \lambda_{42} & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & \lambda_{63} & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 1 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & \lambda_{84} & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 1 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & \lambda_{105} & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & \lambda_{115} & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & \lambda_{125} & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & \lambda_{146} & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & \lambda_{167} & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & \lambda_{188}
\end{bmatrix}
\begin{bmatrix}
\xi_1 \\ \xi_2 \\ \xi_3 \\ \xi_4 \\ \xi_5 \\ \xi_6 \\ \xi_7 \\ \xi_8
\end{bmatrix}
+
\begin{bmatrix}
\delta_1 \\ \delta_2 \\ \delta_3 \\ \delta_4 \\ \delta_5 \\ \delta_6 \\ \delta_7 \\ \delta_8 \\ \delta_9 \\ \delta_{10} \\ \delta_{11} \\ \delta_{12} \\ \delta_{13} \\ \delta_{14} \\ \delta_{15} \\ \delta_{16} \\ \delta_{17} \\ \delta_{18}
\end{bmatrix}
$$

$$
\Phi
\begin{bmatrix}
1 & & & & & & & \\
0 & 1 & & & & & & \\
\Phi_{31} & \Phi_{32} & 1 & & & & & \\
\Phi_{41} & \Phi_{42} & \Phi_{43} & 1 & & & & \\
0 & 0 & 0 & 0 & 1 & & & \\
0 & 0 & 0 & 0 & 0 & 1 & & \\
0 & 0 & 0 & 0 & 0 & 0 & 1 & \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 1
\end{bmatrix}
$$

$\theta\delta$ = diagonal THETA DELTA is the covariance matrix of δ.

Notes: To define the model, the unit of measurement of
each latent variable must be assigned. "The most
convenient way of assigning a unit of measurement is
to fix a one in each column of Λy and Λx" (Joreskog,
and Sorbom, 1983: I.7). In Λy and Λx one λ
in each column has been set equal to unity to fix
the scales of measurement in the latent variables.

In summary, the general LISREL model is defined by the three equations,

Structural Equation Model: $\eta = \beta\eta + \Gamma\xi + \zeta$

Measurement model for Y: $Y = \Lambda_y\eta + \varepsilon$

Measurement model for X: $X = \Lambda_x\xi + \delta$

with the assumptions (1) ζ is uncorrelated with ξ

(2) ε is uncorrelated with η

(3) δ is uncorrelated with ξ

(4) ζ, ε and δ are mutually uncorrelated

(5) β has zeroes in the diagonal and $I-\beta$ is non-singular.

Two additional basic assumptions for employing the maximum likelihood technique for estimating the model are that the data is a random sample of independent observations from a population and that the observed variables have a multi-variate normal distribution (Joreskog and Sorbom, 1983). As outlined in the description of data collection procedures, the data have been gathered from a randomly selected sample of firms. All measures are at the interval and ratio level. Multi-variate normality is assumed.

Analysis Procedures

The procedure outlined by Lomax (1982) was followed by the researcher in developing and testing the initial model, then in revising the initial model to arrive at the final

model. This procedure consists of a number of steps
designed to result in an objective, efficient causal
modelling process. Steps 1 - 5 involve constructing the
hypothetical causal model (see Figures 2.1 and 2.2),
substantiating the model by reviewing the appropriate
literature, selecting a population to be sampled, defining a
set of indicator variables and collecting the data. Each of
these steps has been described in Chapters 1, 2, and 3.

The next step involves a decision about whether to
utilize the correlation or variance-covariance matrix as
input to the analysis. The correlation matrix is used
because the unit of measurement of the indicator variables
is arbitrary (most measures were responses on seven point
scales - i.e. MSI,MST,RSI,RST,COMP,CEN,SUC,CUI) (Lomax,
1982) and cross-sectional data are being used (Maruyama and
McGarvey, 1980).

The major advantage of using the covariance matrix is
that the chi-square statistic is valid as the test statistic
for the hypothesis that sigma is of the form implied by the
model, against the alternative that it is unconstrained
(Churchill and Suprenant, 1982; Joreskog and Sorbom, 1983).
In view of the tremendous criticisms directed at the
chi-square, it was decided that other measures (the
goodness-of-fit index and index of residual variance) of
overall model fit would be more appropriately used in the
current study anyway:

> The many problems associated with the
> overall chi-square goodness-of-fit
> statistic makes it almost useless for
> making inferences about covariance
> structure models (Fornell,1983:446).

Joreskog and Sorbom (1982) have also expressed the view that
the use of the correlation matrix as input might bias some
standard errors downward, with the result that some paths
that appear to be significant are really not. As a check
against the error of accepting a path as statistically
significant when it may not be, the revised model was also
estimated using the covariance matrix as the input. The
estimates, standard errors and T-values from this analysis
are reported in Appendix E. The standard errors are a
little higher in a few cases, but none of the revised model
paths appear statistically insignificant as a result of this
analysis.

The correlation matrix for all variables in the model
is given in Table 4.9. Since the intent is to focus on the
causal model assumed to underly these correlations, they are
not discussed in detail. Significance levels are noted in
the table. To assist in reading the figure, the key for the
abbreviations used for all indicator variables is repeated
here (S precedes all strategic measures, I precedes all
implementer measures):

MST — management support of telemarketing
RI — resolution of implementation issues
RST — sales representatives' support of telemarketing
OS — overall success
MS — mean goal success

CT - increase or decrease in number of telemarketing reps
AC - views about whether the use of telemarketing had
    increased or decreased
RN - routinization
CE - centralization
FO - formalization
DIV - division of labour
DIF - differentiation
ACT - number of core tasks for which telemarketing was used
RCH - extent of change in work routines of outside reps
MSI - management support of innovation
RSI - reps' support of innovation
COM - compatibility

Step 7 of the Lomax (1982) procedures is construction

of the detailed figure of the proposed causal model that

allows derivation of the matrix equations for both

measurement and structural models (see Figure 4.1). The

associated set of matrix equations were given earlier in

Tables 4.6, 4.7, 4.8.

Step 8 is the test of the initial hypothesized model

and steps 9 through 13 outline procedures for assessing and

revising the initial model. There is considerable debate as

to whether it is appropriate to make changes in the initial

model and re-estimate it on the same data or whether one

should simply test the original model, report results and

collect new data to retest the model with its changes.

Obviously the second option is best given infinite

resources. The approach taken here is to test the original

model, make and report changes so the reader can judge

exactly what was done. It is essential to test the revised

model on new data in future research.

TABLE 4.9

Correlation Matrix To Be Analyzed*

	SOS	IOS	SMS	IMS	SCT	ICT	SAC	IAC	SRN	IRN
SOS	1.000									
IOS	.562	1.000								
SMS	.748	.493	1.000							
IMS	.553	.659	.590	1.000						
SCT	.516	.475	.554	.526	1.000					
ICT	.412	.536	.378	.482	.607	1.000				
SAC	.531	.553	.507	.526	.685	.526	1.000			
IAC	.548	.513	.519	.558	.556	.666	.584	1.000		
SRN	.627	.430	.536	.520	.553	.421	.466	.465	1.000	
IRN	.474	.498	.380	.483	.480	.551	.409	.467	.619	1.000
SRI	.282	.225	.317	.258	.031	-.011	.053	.173	.314	.226
IRI	.168	.393	.192	.286	.232	.136	.204	.227	.210	.320
SMST	.201	.199	.178	.141	.031	.044	.073	.179	.060	.061
IMST	.258	.317	.275	.259	.298	.222	.270	.249	.203	.239
SRST	.089	.144	.165	.259	.180	.304	.143	.276	.073	.216
IRST	.100	.047	-.115	.096	.038	.204	.005	.137	.012	.042
SCE	.166	.187	.105	.017	.144	.089	.324	.183	.145	.021
ICE	-.023	-.108	-.037	-.059	.057	.017	.064	-.068	.104	-.015
SFO	-.041	-.101	-.108	-.107	-.170	-.110	-.202	-.139	-.097	.067
IFO	.106	-.065	.089	-.036	-.061	-.019	-.115	.017	.172	.249
SDIF	-.035	-.039	-.001	.016	.071	.112	-.008	.070	.068	.121
IDIF	-.134	-.107	-.096	-.015	-.048	-.003	-.110	.000	.006	.076
SDIV	-.106	-.059	-.014	-.033	-.018	.001	-.120	-.022	.025	.126
IDIV	-.025	-.012	-.019	.013	-.125	-.048	-.044	-.056	.184	.208
SRCH	.313	.194	.218	.189	.272	.207	.388	.221	.307	.168
IRCH	.252	.357	.113	.310	.211	.237	.242	.335	.211	.309
SACT	-.276	.254	.301	.247	.168	.129	.138	.161	.134	.086
IACT	.195	.347	.255	.384	.216	.170	.280	.250	.105	.116
SMSI	.280	.196	.153	.172	.099	.194	.201	.276	.018	.231
IMSI	.282	.289	.287	.249	.174	.250	.219	.283	.210	.213
SRSI	.149	.175	.226	.338	.261	.245	.128	.130	.160	.183
IRSI	.112	.267	.135	.316	.170	.336	.202	.216	.167	.144
SCOM	.111	.046	.109	.088	-.035	.220	-.005	.156	.006	.009
ICOM	.073	.092	.221	.277	.032	.220	.117	.183	.045	.183

Panel 1

	SRI	IRI	SMST	IMST	SRST	IRST	SCE	ICE	SFO	IFO	SDIF	IDIF
SRI	1.000											
IRI	.470	1.000										
SMST	.230	.022	1.000									
IMST	.031	-.298	.296	1.000								
SRST	-.020	.007	.050	.121	1.000							
IRST	-.205	.051	-.043	.215	.514	1.000						
SCE	-.016	.001	-.059	.121	-.020	-.104	1.000					
ICE	.186	.077	-.065	.028	-.033	-.042	.588	1.000				
SFO	.233	-.108	.050	-.139	-.143	-.144	-.034	.027	1.000			
IFO	-.197	.192	-.103	-.151	-.188	-.074	-.093	-.049	.619	1.000		
SDIF	-.179	.185	-.030	-.180	.002	.024	-.277	-.071	.222	.227	1.000	
IDIF	-.167	.124	-.080	-.227	-.067	-.023	-.311	-.106	.199	.083	.764	1.000
SDIV	.175	.180	-.110	-.171	.220	.123	-.246	-.170	.396	.365	.416	.434
IDIV	-.126	.194	-.129	-.127	.202	.215	-.189	-.105	.218	.248	.352	.407
SRCH	-.044	.152	.098	.235	.134	.020	-.175	-.032	-.141	-.106	.012	-.080
IRCH	-.007	.266	.093	.306	.109	.134	.213	.007	-.076	-.048	-.014	-.038
SACT	-.172	.187	.080	.159	.009	.112	.034	.122	-.132	-.055	-.031	-.091
IACT	.056	.242	-.088	.217	.094	.228	.037	.156	-.161	-.064	-.079	-.133
SMSI	-.286	.177	.192	.061	.172	-.187	.137	-.004	.124	.069	-.085	-.105
IMSI	.145	.243	.060	.128	.179	.022	-.035	-.003	.069	.183	.004	.035
SRSI	-.011	-.008	-.025	-.067	.410	.040	-.107	.095	-.080	.000	.132	.039
IRSI	-.114	.027	.044	.170	.240	.362	-.019	-.096	-.127	-.024	-.085	-.178
SCOM	-.076	-.154	-.058	.025	.275	.106	-.008	.079	-.175	-.100	-.202	-.238
ICOM	-.137	-.044	-.202	.065	.233	.164	-.042	-.091	-.277	-.084	-.152	-.096

Panel 2

	SDIV	IDIV	SRCH	IRCH	SACT	IACT	SMSI	IMSI	SRSI	IRSI	SCOM	ICOM
SDIV	1.000											
IDIV	.752	1.000										
SRCH	-.113	-.069	1.000									
IRCH	-.294	-.164	.497	1.000								
SACT	-.090	-.046	.074	.042	1.000							
IACT	-.074	-.060	.210	.223	.621	1.000						
SMSI	-.036	-.172	.109	.114	.078	.163	1.000					
IMSI	.075	-.005	.221	.057	.071	.197	.337	1.000				
SRSI	-.027	-.005	.193	.106	.124	.102	.076	-.130	1.000			
IRSI	-.153	-.021	.264	.237	.072	.213	.074	.223	.338	1.000		
SCOM	.041	.037	.011	-.107	.256	.125	.056	.038	.145	.159	1.000	
ICOM	.013	.010	-.054	-.058	.226	.296	.022	.093	.010	.146	.433	1.000

*r = .16 p < .05   r = .21 p < .01   (one-tail test)

The Lomax procedures help determine whether possible correlated measurement error exists between the indicator variables, and whether any hypothesized paths should be omitted (because of lack of significance) or new paths introduced (by examining the first-order derivatives or modification indices). The major advantage of following these procedures is that decisions are made without the preferences of the investigator influencing the outcome.

The results of the initial model will be presented in the next section, paralleling the actual sequence followed in carrying out this procedure. This will be followed by a description of changes made to this model and a presentation of the revised model. Assessment of research hypotheses has been incorporated into the results of the initial research model.

Testing the Initial Model: Results

In order to obtain the maximum likelihood estimates for the initial model, two changes in the proposed measurement model had to be made. Firstly, in the Y measurement model, two measures of reps' support of telemarketing were collected in the data collection phase of the study. However, even though the implementer measure of this variable loaded significantly on the rep support factor, it caused a negative variance in the theta epsilon matrix when the model was estimated. To overcome this

problem the strategic measure was fixed at 1.00 and measurement error at zero (Pedhazur, 1982:644; Phillips,1982:540-545; John and Martin, 1984:285). In the X measurement model, the implementer centralization measure did not load significantly on the centralization factor and also caused a negative variance in the theta delta matrix. The strategic centralization measure was subsequently fixed at 1.00.

An examination of the correlation matrix suggested that these problem variables correlated very little with anything except the corresponding strategy measures (SRST/IRST=.514 and SCE/ICE=.585). These two changes eliminated all problems with the theta epsilon and theta delta matrices having negative variances. It is an obvious disappointment to drop these two measures; however maximum likelihood model estimates generated before these two changes were made (when the negative variances were present) were virtually the same as estimates generated after these changes were made.

The measures of fit for the overall model will be presented in the next section. The LISREL parameter estimates and standard errors for the measurement model are given in Table 4.10. Structural model parameters are presented in Table 4.11.

Several pieces of evidence are useful in judging the
overall fit of the model to the data. Even though this
initial model was revised and improved, these initial
measures of fit are presented so readers can more completely
assess the initial model and comparisons can be made to the
revised model. The initial model produced a chi-square of
847.50 with 456 degrees of freedom. This chi-square is
significant (p = .000) indicating that this model does not
completely account for the correlation matrix. Given the
criticisms directed at this statistic, other appropriate
measures of fit are the goodness of fit index and the root
mean square residual. The goodness of fit index for this
initial model was .69 and the root mean square residual was
.12. Both of these indicators are suggestive of a moderate
fit of the model to the data (Joreskog and Sorbom, 1983).

Table 4.10

Maximum Likelihood Parameter Estimates:
Initial Measurement Model

Indicator Variables	Latent Variables	LISREL Estimates	Standard Error	T Value	Standardized Value
SMST[a]	Mgt. support	1.00	–	–	.45
IMST	of tm	.84*	.39	2.17	.37
SRI[a]	Resolution	1.00	–	–	.71
IRI	of issues	.90*	.22	3.99	.64
SRST[a]	Reps' support	1.00	–	–	.99
	of tm				
SOS[a]	Success	1.00	–	–	.75
IOS		.95*	.12	7.66	.71
SMS		.96**	.12	7.72	.72
IMS		.99**	.12	7.98	.74
SCT		.98**	.12	7.96	.74
ICT		.90**	.13	7.17	.68
SAC		.97**	.12	7.84	.73
IAC		.98**	.12	7.93	.73
SRN		.92**	.13	7.38	.69
IRN		.85**	.13	6.76	.64

a Reference Indicator

* P < .05 (one-tail test)

** P < .01

Table 4.10 (Continued)

Maximum Likelihood Parameter Estimates:
Initial Measurement Model

Indicator Variables	Latent Variables	LISREL Estimates	Standard Error	T Value	Standardized Value
SCE[a]	Centralization	1.00	–	–	1.00
SFO[a]	Formalization	1.00	–	–	1.00
IFO		.65**	.11	6.09	.65
SDIF[a]	Differentiation	1.00	–	–	1.00
IDIF		.92**	.09	10.14	.92
SDIV[a]	Division of	1.00	–	–	1.00
IDIV	labour	.76**	.09	8.24	.76
SRCH[a]	Core task	1.00	–	–	1.00
IRCH	use of tm	.67**	.11	6.05	.67
SACT		.19*	.11	1.82	.19
IACT		.36**	.10	3.43	.36
SMSI[a]	Mgt support	1.00	–	–	1.00
IMSI	of innovation	.36**	.10	3.45	.36
STSI[a]	Reps' support	1.00	–	–	1.00
IRSI	of innovation	.36**	.10	3.46	.36
SCOMP[a]	Compatibility	1.00	–	–	1.00
ICOMP		.46**	.10	4.29	.46

a Reference Indicator

* $p < .05$ (one-tail test)

** $P < .01$

Table 4.11

Maximum Likelihood Parameter Estimates:
Initial Structural Model

Parameter	LISREL Estimate	Standard Error	T Value	Standardized Value
β_{21}	1.11**	.48	2.33	.70
β_{42}	.47**	.14	3.40	.45
β_{43}	.14*	.07	2.12	.18
γ_{16}	.21*	.09	2.38	.47
γ_{18}	-.07	.06	-1.12	-.16
γ_{37}	.40**	.10	3.94	.40
γ_{38}	.24**	.09	2.55	.24
γ_{41}	.10	.07	1.49	.14
γ_{42}	-.12	.07	-1.61	-.16
γ_{43}	.02	.08	.22	.02
γ_{44}	.01	.08	.15	.02
γ_{45}	.29**	.08	3.69	.38
ϕ_{31}	-.34**	.09	-3.93	-.34
ϕ_{32}	.25**	.09	2.67	.25
ϕ_{41}	-.24**	.08	-2.95	-.24
ϕ_{42}	.41**	.09	4.56	.41
ϕ_{43}	.50**	.08	6.14	.50

* $P < .05$ (one-tail test)

** $P < .01$

The Measurement Model

As reported in Table 4.10, all loadings on both the independent variable and dependent variable measurement models are positive and statistically significant. Beginning with the Y variables, the 10 measures of success were all very consistent. The factor loadings were all very high and significant at the .01 level of probability. Standard errors for these success measures ranged from .12 to .13. The squared multiple correlations (varies between 0 and 1 and measures the reliability of each variable within the context of the model) for these measures ranged from a high of .59 for the strategic assessment of overall success to a low of .43 for the implementer routinization measure.

Measures for resolution of implementation issues and management support of telemarketing measures were also good. Factor loadings were high and significant. On the negative side, standard errors for the implementer measures of these two constructs were fairly high. The standard error for the implementer measure of resolution of implementation issues is .23, while the standard error for the implementer measure of management support of telemarketing is .39. However, the t-values are still significant.

The loadings of the X indicators on the independent variables were also high and significant. Standard errors for these variables were lower (.09 to .11) than those

associated with the y indicators. All t-values were significant at the .05 level of probability at the very minimum; most were significant at the .01 level.

The Structural Model

Table 4.11 reveals that all Beta coefficients are in the expected directions and significant. To obtain a preliminary picture of where the data either support or do not support the structural model, it is useful to briefly examine Figure 4.2. Beginning at the top of Figure 4.2, of the four salesforce structure variables hypothesized as affecting success, only centralization and formalization appear to have an effect. Centralization is positively related to success $(\gamma = .10, t = 1.49, p < .10)$ and formalization has a negative relationship $(\gamma = -.12, t = -1.61, p < .06)$. Looking to the central paths of the model, beginning at the far left, sales representatives' support of innovation has a significant, positive effect on reps' support of telemarketing $(\gamma = .40, t = 3.94, p < .01)$. Compatibility also has a significant positive effect on reps' support of telemarketing $(\gamma = .24, t = 2.55, p < .01)$. In turn, reps' support of telemarketing causes increased success $(\beta = .14, t = 2.12, p < .05)$.

Management support of innovation has a positive effect on management support of telemarketing $(\gamma = .21, t = 2.38, p < .01)$ but compatibility does not significantly affect

management support ($\gamma = -.07$, $t = -1.12$). Management support positively affects the resolution of implementation issues ($\beta = .1.11$, $t = 2.33$, $p < .01$) and resolution of implementation issues has a positive affect on success ($\beta = .47$, $t = 3.40$, $p < .01$).

Finally, looking at the bottom arm of the model, use of telemarketing for core functions of the salesforce causes an increase in success ($\gamma = .29$, $t = 3.69$, $p < .01$).

Correlations between structural variables were as expected. Centralization was negatively correlated with both division of labour and differentiation. One would expect more complex firms to be less centralized and vice versa. As well formalization was positively associated with division of labour and differentiation. Again, one would expect more complex firms to be more formal. Also as expected, both dimensions of company division of labour and differentiation were highly correlated.

Figure 4.2   The Initial LISREL Model Showing β, γ, λ, and ϕ Estimates

Hypothesis Testing

A detailed examination of the structural model can be achieved by examining the support or lack of support for each of the research hypotheses. The majority of hypotheses can be statistically tested by examining the structural model beta and gamma coefficients. To examine the structural model in more detail, each hypothesis will be restated then evidence either supporting or opposing each will be given.

H1 - Centralization is positively associated with the successful implementation of less favored telemarketing innovatons and negatively with implementation of ones that are more favored.

The LISREL model as formulated in Figure 4.1 shows centralization hypothesized as having only a main positive effect on success. Because of the difficulty in testing interactions in a LISREL model, the model was respecified in this way and H1 was reformulated:

H1 - Centralization is positively associated with successful innovation adoption.

In view of the literature introduced in Chapter 2, this necessary reformulation appears reasonable. To recap, one view was that decentralization promotes effective implementation in much the same way as it supports initiation of the innovation (Yin 1979). The other side argues that during implementation, stricter channels of

authority (centralization) may reduce conflict and ambiguity and promote successful implementation (Beyer and Trice 1979; Zaltman et. al. 1973). We can also suggest that Zmud (1982) found support for this proposition. In organizations where the innovation (modern software practices) was not wanted by members of the organization, centralization was positively related to successful adoption.

In this study centralization appears to have a positive effect on success ($\gamma = .10$, $t = 1.49$). (As can be noted from the final estimates given later in Table 4.14, γ was estimated at .13, $t = 2.06$, $p < .05$).

H2 - Formalization in the salesforce is positively related to successful implementation of telemarketing.

This hypothesis was not supported in the research. In fact, the data suggest that increased formalization has a negative relationship to success. In the initial model the unstandardized gamma coefficient is -.12 with an associated t-value of -1.61 which is statistically significant at the .06 level. More formalization appears to have a negative effect on the success of telemarketing in sales organizations.

As discussed in Chapter 2, the previous research was fairly divided on the issue of whether formalization would have a positive or negative effect so this finding should not be interpreted as representing an unexpected finding in

a long line of previous work. This study supports the Beyer and Trice (1978) work in discounting the idea that the innovation or change process requires organizations to be ambidextrous in the innovation adoption process. Many writers argue that more formalization in rules inhibits initiation and adoption of innovations. This study suggests that formalization also negatively affects successful implementation.

H3 - Complexity of the salesforce is positively related to successful implementation of telemarketing.

No support for H3 was found in this study. Neither division-of labour nor differentiation had any significant direct effect on success. Following Lomax (1982) an examination of the first-order derivatives of the initial model suggested that complexity had a positive effect on the resolution of implementation issues. This effect was subsequently tested and supported in the final model. Both division of labour and differentiation had significant positive effects on the resolution of implementation issues (γ division of labour = .20, t = 2.25, p <.05; γ differentiation = .14, t = 1.58, p <.10).

More complex firms are likely to exhibit higher resolution of issues in telemarketing implementation. In this way, complexity has an indirect effect on success, because higher resolution of implementation issues causes higher success. This finding tends to further discount the

need for ambidextrous organizations in the innovation adoption process. Complexity has been found in other work to have a positive effect in the initiation stage of the process. This study has found that it also positively affects the process of implementation leading to higher success.

H4 (a) 'Sales management support of innovation is positively associated with support of telemarketing by sales management.

(b) Sales rep support of innovation is positively associated with support of telemarketing by sales reps.

Both H4 (a) and (b) are supported by the research. Management support of innovation generally causes increased support of telemarketing (γ = .21, t = 2.38, p<.01). As well, sales rep support for innovation or change causes increased support of telemarketing specifically (γ = .40, t = 3.94, p <.01).

H5 (a) Sales management support of telemarketing is positively related to the resolution of implementation issues.

(b) Sales reps' support of telemarketing is positively related with success.

Both H5 (a) and (b) were supported in this study. Increased management support of telemarketing resulted in an increase in the resolution of implementation issues (β = 1.11, t = 2.33, p <.01. The relatively high standard error associated with the β estimate should be noted). Increased

sales reps' support of telemarketing has a positive effect
on success (β = .14, t = 2.12, p <.05). When management is
supportive of telemarketing, they appear to take steps to
improve the implementation process. Sales rep support of
telemarketing has a direct affect on the success of the
innovation.

H6 - Success in telemarketing adoption is positively
related to the resolution of implementation issues.

Strong support for H6 was found in the data. As shown
in Table 4.11, the beta coefficient was estimated at .47
with an associated t-value of 3.40 with p <.01. The data
support the work of change theorists in suggesting that
firms who have worked hard to plan, motivate, overcome
resistance and evaluate the innovation are more successful.

H7 (a) Compatibility of telemarketing is positively
related to support of telemarketing by sales management.

(b) Compatibility of telemarketing is positively
related to support of telemarketing by sales reps.

H7 (a) was not supported (γ = -.07, t = -1.12, p
>.05) but H7 (b) was supported (γ = .24, t = 2.55, p <.01).
Compatibility appears to affect sales rep support of
telemarketing but has no effect on sales management support
of telemarketing. In sales organizations where existing
sales practices were somewhat similar to innovative
telemarketing practices, sales reps likely see the
consistency of telemarketing with past practices. It

appears that this experience causes them to be more
supportive of the innovation. In those organizations where
telemarketing is a complete departure from past practices,
sales reps are less likely to be supportive. It is
interesting that compatibility of the innovation has no real
effect on sales management. Perhaps because sales managers
are not so directly involved in day-to-day sales practices,
consistency with those practices is not as important as it
is to sales reps.

H8 - More successful implementation of telemarketing
occurs in organizatons where the innovation is used for core
applicatons of the salesforce.

H8 was also supported in this study ($Y = .29$, $t = 3.69$, $p < .01$). Sales organizations that used telemarketing
for core applications were more successful. Salesforces
that initially integrated telemarketing into the mainstream
of their core activities were more successful than those who
utilized it in a peripheral fashion not resulting in a
change in the sales reps' practices.

Further evidence to use in assessing the initial
structural model can be obtained by examining the squared
multiple correlations for the structural equations
(Churchill and Suprenant, 1982: 499-500). These
correlations measure the amount of variance in each
dependent or eta construct that is explained by the fitted
model. The correlation values for the initial model only

are presented in Table 4.12.

Table 4.12
Squared Multiple Correlations for the Structural
Equations: The Initial Model

Management Support of Telemarketing	Resolution of Implementation Issues	Sales Rep Support of Telemarketing	Success
.24	.49	.22	.42

A fairly high proportion of the variance in the dependent constructs was explained by the model. The model was particularly successful in explaining a high proportion of variance in success and resolution of implementation issues. Forty-two percent of the variance in success was explained by the initial model. Forty-nine percent of the variance in resolution of implementation issues was also accounted for. The model was less successful in explaining management and sales rep support of telemarketing.

Revising the Initial Model: Toward a Final Model

Following Churchill and Suprenant (1982) and Gardner, Lalonde and Pierson (1983), alterations were made to the initial model. These revisions followed the Lomax (1982) procedures.

First, the measurement portion of the model was examined by devising a list of indicator variables where correlated measurement error was reasonable theoretically.

The initial model was fairly restrictive in that no
correlated measurement error was modeled even though it was
likely that some would exist. In this study, it was
expected that correlated measurement error was likely to
occur (a) between strategic measures and between implementer
measures of the variables and (b) between identical scales
used to measure the same variables. From these pairs, the
largest absolute first-order derivative was selected and the
associated parameter was freed (estimated) in the subsequent
model. If the difference in χ^2 values and the associated
t-values were significant, the parameter remained free and
the next parameter was freed. This process was halted when
the freeing of a parameter could not be justified
theoretically, when the drop in χ^2 was not significant, or
when the t-value was not significant. (Modification indices
are available in LISREL VI output which can be used for the
same purpose). Figure 4.3 displays the final model and
shows the correlated measurement error.

Figure 4.3
The Revised LISREL Model
Showing ξ, Λ, λ, φ and Correlated
Measurement Error Estimates

The next step in revising the initial model involved fixing nonsignificant β and γ coefficients to zero. Finally, the first-order derivatives for parameters of Beta and Gamma, previously fixed at zero were examined. When theoretically reasonable, the parameter associated with the largest derivative was estimated in the next model. Again, χ^2 was assessed to determine if the difference was significant.

The summary statistics associated with the final causal model are presented in Tables 4.13 and 4.14. The same measurement model proposed in the initial model is retained in the final model with the exception that the model was relaxed allowing some correlated measurement error as shown in Figure 4.3. A large amount of correlated measurement error was modeled between the success indicators. As noted earlier, it was expected that common measurement would be found between strategic measures because a common informant is used across measures (for example, SOS and SMS) and between similar scales because a common scale is used with both informants (for example, SRN and IRN).

One of the four indicators of core use (SACT) was fixed at zero. This indicator loaded significantly in the initial model. However, once correlated measurement error was modelled between SACT and IACT (.11), the loading of SACT on coreuse became insignificant.

The structural path changes from the initial model

were also relatively few:

(1) Compatibility was not found to affect management support of innovation. This path was dropped.

(2) Paths between (a) division of labour and success, and (b) differentiation and success were dropped. Paths between (a) division of labour and resolution of implementation issues and (b) differentiation and resolution of implementation issues were introduced. The justification for these changes was discussed in the section reporting hypothesis testing.

Table 4.13

Maximum Likelihood Parameter Estimates:
Revised Measurement Model

Indicator Variables	Latent Variables	LISREL Estimates	Standard Error	T Value	Standardized Value
SMST [a]	Mgt. support	1.00	–	–	.35
IMST	of tm	1.26**	.52	2.40	.45
SRI [a]	Resolution	1.00	–	–	.71
IRI	of issues	1.03**	.20	5.16	.72
SRST [a]	Rep support of tm	1.00	–	–	.99
SOS [a]	Success	1.00	–	–	.72
IOS		.97**	.14	7.02	.70
SMS		.92**	.10	9.05	.67
IMS		.99**	.14	7.19	.71
SCT		.97**	.14	7.16	.70
ICT		.84**	.14	7.03	.60
SAC		.99**	.14	7.19	.72
IAC		1.01**	.14	7.36	.73
SRN		.91**	.12	7.32	.66
IRN		.85**	.14	6.15	.61

a Reference Indicator

* P < .05   (one-tail test)

** P < .01

Table 4.13 (Continued)

Maximum Likelihood Parameter Estimates:
Revised Measurement Model

Indicator Variables	Latent Variables	LISREL Estimates	Standard Error	T Value	Standardized Value
SCE[a]	Centralization	1.00	–	–	1.00
SFO[a]	Formalization	1.00	–	–	1.00
IFO		.66**	.10	6.47	.66
SDIF[a]	Differentiation	1.00	–	–	1.00
IDIF		.96**	.08	11.52	.96
SDIV[a]	Division of	1.00	–	–	1.00
IDIV	labour	.80**	.09	9.15	.80
SRCH[a]	Core task	1.00	–	–	1.00
IRCH	use of tm	.61**	.11	5.40	.61
IACT		.23**	.08	2.94	.23
SMSI[a]	Mgt. support	1.00	–	–	1.00
IMSI	of innovation	.33**	.10	3.32	.35
STSI[a]	Reps' support	1.00	–	–	1.00
IRSI	of innovation	.35**	.10	3.42	.35
SCOMP[a]	Compatibility	1.00	–	–	1.00
ICOMP		.46**	.10	4.41	.46

a Reference Indicator

* p < .05   (one-tail test)

** P < .01

Table 4.14

Maximum Likelihood Parameter Estimates: Revised Structural Model

Parameter	LISREL Estimate	Standard Error	T Value	Standardized Value
β_{21}	1.64*	.71	2.20	.83
β_{42}	.59**	.14	4.11	.57
β_{43}	.11*	.06	1.70	.15
γ_{16}	.14*	.07	2.03	.39
γ_{23}	.20*	.09	2.25	.29
γ_{24}	.14*	.09	1.58	.20
γ_{37}	.39**	.10	3.90	.39
γ_{38}	.23**	.09	2.52	.23
γ_{41}	.13*	.07	2.06	.19
γ_{42}	-.15*	.07	-2.11	-.20
γ_{45}	.22**	.07	3.01	.31
ϕ_{31}	-.33**	.08	-3.98	-.33
ϕ_{32}	.29**	.09	3.08	.29
ϕ_{41}	-.24**	.08	-2.88	-.24
ϕ_{42}	.45**	.09	5.07	.45
ϕ_{43}	.54**	.08	7.10	.54

* $P < .05$ (one-tail test)

** $P < .01$

The Revised Model: Summary Statistics

The final chi-square of 658.9 with 443 degrees of freedom is significant (p = .000) indicating that even this model does not completely account for the correlation matrix. However, the chi-square was significantly reduced by 188.6 at a cost of 13 degrees of freedom from the initial model. This reduction indicates that significant improvements were made in the revised model. As well, Wheaton, Muthen, Alwin and Summers (1977) suggest that a ratio of chi-square to degrees of freedom that is less than 5.0, is considered an adequate fit. Since the ratio in the revised model is 1.49, the fit can be considered acceptable (Gardner and Lalonde, 1983).

Further evidence of acceptability is the relatively high amount of variance in the eta variables that is explained by the model. The squared multiple correlations for the revised model are shown in Table 4.15. The major purpose of the research was to explain success. Accounting for almost half of the variation in success with this introductory model provides a good framework from which to conduct future research. In comparing these correlations to those reported in Table 4.12 for the initial model, the obvious difference is an increase in accounting for variance in the resolution of implementation issues. This is largely a result of the introduction of structural paths between division of labour and resolution of implementation issues

and differentiation and resolution of implementation issues.
The variation explained in management support of
telemarketing decreased when the insignificant path from
compatibility to management support of telemarketing was
dropped.

Table 4.15

Squared Multiple Correlations for the Structural
Equations: The Revised Model

Management Support of Telemarketing	Resolution of Implementation Issues	Sales Rep Support of Telemarketing	Success
.15	.88	.21	.44

The total coefficient of determination for the
structural equations (.80) is also suggestive of a moderate
to good fit. The reasonably high goodness of fit index of
.75 adds support for the model being judged as moderate to
good. The root mean square residual (.12) is acceptable.

Because the chi-square has been criticized as being
highly sensitive to sample size (Bagozzi, 1980; Joreskog and
Sorbom, 1983), Tucker and Lewis (1973) have derived a
reliability coefficient that is not as sensitive to sample
size. This coefficient as described by Bagozzi (1980) is a
ratio of the amount of covariation explained by a proposed
structure to the amount of covariaton available to be

explained by a proposed structure. The Tucker and Lewis (1973) reliability coefficient indicates about .952 of the covariation to be explained is accounted for by the proposed structure (Bagozzi, 1980, 106-112).

Assessment of the Revised Model

In assessing overall fit of the model to the data, most of the indicators (except chi-square) suggest that the revised model is a moderately good fit. The final model represents a definite improvement as the GFI was .75 compared to .69, the coefficient of determination and squared multiple correlations were also somewhat better in the final model. The drop in Chi-square (188.6 points) at the expense of 13 df was very significant. Although these summary statistics argue for the model being judged as moderate to good, to really make a judgment as to whether these results are reasonable or not, one should evaluate them against other comparable work.

Because LISREL has been used only recently in marketing and rather more frequently for analyzing construct validity, (Phillips, 1982; John and Reve, 1984), than for yielding substantive findings (Churchill and Suprenant, 1982; John and Martin, 1984), it is difficult to compare the results obtained here with previous work.

The John and Martin (1984) study of effects of organizational structure of marketing planning on

credibility and utilization of plan output offers a good
basis of comparison, for two reasons. The unit of analysis
is the organization and the John and Martin independent
variables are organization structure variables which
parallel the organization structure variables incorporated
into the current study. Fairly comparable results were
achieved in both pieces of research. The chi-square for the
John and Martin model was still large and significant even
though other pieces of evidence - hypothesis support, small
residuals and fairly high proportion of explained variance
in the two dependent variables (60% of plan utilization and
66% of plan credibility) suggest a strong model. Very
similar results were found in this study.

Summary

The final model has explained considerable amounts of
variation in success and resolution of implementation
issues. It provides a good grounding for future research,
which should ideally be of a longitudinal nature so causal
conclusions can be drawn with greater confidence. A caveat
must be placed on all conclusions to be drawn from the
study. Because the model was tested on cross-sectional data
in a non-experimental design, all causal implications should
be viewed as preliminary.

Chapter 5, the concluding chapter, will present the conclusions, implications, and summarize the strengths and weaknesses of the study.

CHAPTER 5 – CONCLUSIONS AND DISCUSSION

The researcher will first discuss the measurement and structural models, drawing conclusions and implications as well as assessing individual portions of these models. This will be followed by a discussion and assessment of the overall model and a summary statement of implications for theory and practicing marketing managers. This chapter and the thesis will conclude with an assessment of the study's strengths and weaknesses and suggestions for future research.

The Measurement Model: Assessment and Implications

The measurement portion of both the initial and final models can be judged as moderately successful. On the positive side, all loadings for the dependent (y) and independent (x) variables (with the single exceptions of the implementer centralization variable and implementer rep support of telemarketing which had to be deleted to run the analysis), were positive and statistically significant. On the negative side, a few of the standard errors were fairly high.

The Dependent Variables

It is apparent from the research model, and it has been argued strongly throughout this thesis, that the success construct is of central importance in the research.

Of particular interest then, in examining the measurement model is the finding that all measures of success loaded very highly on the success construct. In addition, all ten measures of success were highly correlated with each other. These pieces of evidence suggest that all measures seemed to be tapping the same underlying construct. Given the fairly strong theoretical underpinnings used in developing these measures, it is reasonable to conclude that success was indeed the unobserved construct being measured.

Because the measurement of success was central to this study, the researcher utilized 10 measures of it (representing four different theoretical approaches to studying success). As might be expected, ten measures of success required considerable interviewing time. This allocation of resources was deemed necessary because success was such a major focus of the study - but important implications for future research designs might be drawn from examining the 10 success measures. If the measures gave consistent results in this study, fewer measures might be sufficient for future designs.

Within this research model, one can conclude that all indicators of success were fairly reliable and fairly consistent. There was very little difference in the reliability of the measures (that is, one measure was not extremely high or another extremely low). One can make this

conclusion on the basis of the squared multiple correlations which provide a measure of the reliability of each indicator within the context of the specified research model (Joreskog and Sorbom, 1983). These squared multiple correlations ranged from .425 for the implementer report on routinization to .585 for the strategic report on overall success.

The reliability as suggested by the squared multiple correlation coefficients, does not allow one to conclude that all measures would be approximately equally reliable in future research. These coefficients describe the reliability of the indicators only within the context of the current model. However, inter-rater correlations for each indicator were high (see Table 4.3) and all ten indicators were highly correlated with each other (see Table 4.9). As well the standardized factor loadings of the ten indicators ranged from .64 to .75.

The relatively high inter-correlations and factor loadings suggest future researchers might consider reducing the number of success indicators to perhaps four or five. This number of indicators would still be sufficient to rigorously estimate success. Investigators could shift some resources to collecting better measures for some of the other variables which exhibited significant causal effects in the model. Notable here is management support of telemarketing. While the two indicators of this construct

significantly loaded on the factor, and the management

support of telemarketing construct was a significant causal

factor in the structural portion of the model, it had a

relatively high standard error. Also, both of the indicator

variables were one item measures. The development of more

reliable multi-item measures would be very useful.

Secondly, increased efforts to develop more and

improved measures of sales representatives' support of

telemarketing would be a useful tradeoff in future work. As

outlined earlier, the implementer measure of reps' support

of telemarketing had to be dropped to get the initial model

to run without negative variances in the theta epsilon

matrix. The strategic measure of reps' support of

telemarketing was assumed to measure sales representatives'

support of telemarketing without measurement error.

Obviously more indicators would improve the estimation of

this construct.

Lastly, the resolution of implementation issues

measures loaded highly and significantly on the underlying

factor. Because of its central importance in the structural

model, future attention could usefully be directed at

improving the measurement of this construct as well. The

approach used here (based on Ginzberg (1975)) seems to be

promising but future work is definitely needed to establish

construct validity.

The Independent Variables

Overall, the measurement of the independent variables was also fairly successful (see Tables 4.10 and 4.13) with all loadings being positive and statistically significant. The loadings for the four organization structure variables were especially high (ranging from .65 to .92). This is probably a result of the objective nature of these variables. The indicator loadings on attitudinal constructs were somewhat lower but still statistically significant. As reported by John and Reve (1982), key informant reports of organizational structure variables tend to be more reliable and valid than reports of attitudinal variables.

Notwithstanding the fact that the measurement model for the X variables was successful, measurement of individual X variables undoubtedly could be improved in future work. As discussed at length in Chapter 3, the two indicators of management support for innovation were each single item scales. Since this initial model testing confirmed the importance of this construct in the model, future emphasis at improvements in measurement are deemed to be worthwhile and necessary. Similarly, centralization was measured with only one indicator variable so future research should attempt to incorporate multiple measures.

In conclusion, the measurement model for both the dependent and independent variables can be assessed as

fairly good, given the preliminary nature of the study.

This conclusion does not preclude the necessity for future

improvements as suggested above.

The Structural Model: Assessment and Implications

The majority of structural paths in the model were

incorporated into the eight hypotheses tested in the

research. On the positive side, a large number of the

research hypotheses were supported with the t-values

indicating that parameters were significantly different from

zero. Conclusions regarding each of these hypotheses and

implications of each for theory and practice follows below

as part of an assessment of the structural model.

The Organization Structure Hypotheses

The hypotheses incorporating the structural variables

were probably the most heavily grounded in previous

writings. However, directly related empirical research has

definitely been inconclusive. As such, the implications and

conclusions about the effects of the structural variables

make a useful contribution to our understanding of the role

of organization structure on the innovation process.

Centralization was found to have a positive direct

affect on success. This finding supports Zaltman's (1973)

argument that centralization probably reduces conflict and ambiguity leading to more effective implementation. If one accepts previous findings that decentralization fosters innovation adoption (Beyer and Trice, ce, 1979, Pierce and Delbecq, 1977), then some partial support for the argument calling for organizations to exhibit ambidextrous characteristics as they pass through the innovation process is provided. At the very least, it appears that high decision participation (decentralization) in organizations enhances adoption but then tends to inhibit success.

Zmud's (1982) notion that centralization interacts with positive management attitudes to the innovation was not tested here (Original Hypothesis 1). Zmud observed partial support for his hypothesis that centralization would be positively associated with implementation of innovations when the innovation is not wanted. He defined a priori that the innovation he studied (software practices) was not wanted. It seems more reasonable (in this study) to assume that the innovation was wanted by the adopting organizations. Previous research is not available to guide us on this point, but it seems more plausible to assume that only sales organizations that did want telemarketing would adopt it. If one accepts this view, then one can conclude from this research that centralization is positively related to compatible innovations.

To truly clarify these conflicting findings, a

longitudinal study is probably necessary. The researcher could follow firms exhibiting favorable and less favorable attitudes at the time of adoption. However, given that Zmud only researched centralization in relation to less wanted innovations and speculated on the effect on wanted innovations, it seems appropriate to offer the interim conclusion in support of earlier work (Zaltman, 1973; Pierce and Delbecq; 1977; Beyer and Trice, 1979), that centralization has positive effects on both less wanted and wanted innovations.

Contrary to the hypothesis adopted for this study, formalization was found to negatively affect success. The previous research was fairly indecisive so this finding does not represent a major split with previous work. Rather it lends needed empirical support to the notion that fewer written rules and job guidelines lead to increased success of innovation implementation (Beyer and Trice, 1978). This finding contravenes the notion that it is advantageous for an organization to be ambidextrous in structure during the innovation adoption. Less formalization appears to have positive effects on both adoption of the innovation and its ensuing success in implementation. The implication is that firms wishing to be successfully innovative should develop a minimum of rules and job guidelines. Lack of formalization will enhance both the likelihood of adoption and successful implementation.

Interestingly, of the few pieces of previous work, Zmud's (1982) work found contrary findings - formalization was positively related to implementation. Given that Zmud's firms were judged to not favor the innovation, a contingency hypothesis cannot be ruled out - formalization may be positively associated with success for less favored innovations and negatively associated with more favored ones. This idea makes theoretical sense in that rules inhibit activities of those who want the innovation but enhance activities of those who do not. Future research is required to assess this possibility. The conclusion to be drawn from this study is that formalization has a negative effect on success.

Salesforce complexity was found to have no significant direct effect on success. However, both division of labour and differentiation have a significant positive effect on the resolution of implementation issues. In turn, successful resolution of implementation issues has a positive significant effect on success. More complex firms tend to perform the implementation process better than simpler firms. This positive relationship between complexity and resolution of implementation issues probably occurs because managers in more complex forms recognize the greater potential for confusion and conflict inherent in the complexity of their firms (Zaltman, 1973) and compensate through carefully resolving implementation issues.

This finding also provides evidence for the debate on the desirability of structurally ambidextrous innovative organizations. Since it is generally agreed that complexity is a positive influence on the initiation and adoption stages, (Lawrence and Lorsch, 1967, Mohr, 1969) and this study supports the argument that complexity is positively related to resolution of implementation issues, an ambidextrous organization does not appear to offer any major advantages. In fact as suggested by Pierce and Delbecq (1977), complexity appears to have a positive impact on all three stages of the process.

In conclusion, a successfully innovative firm is likely to be relatively informal, but structured with a higher degree of job differentiation, division of labour and centralization. Centralization is the only structural characteristic which has differential effects upon various stages of the adoption process - with less centralization an advantage during initiation but a hindrance on successful implementation. Overall, (with the exception of centralization) the need for innovative firms to exhibit ambidextrous structural characteristics while proceeding through the innovation process was not supported. This finding has welcome implications for managers in innovative firms who do not have to try to manage or create an organization with different structural characteristics at different stages of the innovation process.

The Management Support Hypotheses

The high support found for both hypotheses 4 and 5
lead one to conclude that both sales management and sales
representative support for innovation generally and
telemarketing specifically are key factors in successfully
implementing the telemarketing innovation. In sales
organizations where sales management has previously
supported innovation, management is likely to support the
telemarketing innovation. Similarly, when sales reps
support change, they support telemarketing. Furthermore,
support of telemarketing by management causes a better
resolution of implementation issues. It appears that
management who support the innovation manage the
implementation process more carefully. Reps' support of
telemarketing has a direct positive effect on telemarketing
success. These findings are supportive of previous work in
MIS settings (Radnor and Neal, 1973), urban service
bureaucracies (Yin, 1979; Beyer and Trice, 1978; Hage and
Dewer, 1973), and by the managerial change theorists
(Beckhard and Harris, 1977; Greiner, 1967; Kimberly,1981).
This body of work has consistently noted the role of change
agents or supervisors and managers who support the change.

The major contribution of this study has been to
develop causal paths between these variables, incorporate
them into a causal model and test them empirically in a
fairly large sample of business organizations. The support

found for this portion of the model challenges managers in innovative firms to expend resources to gain support for telemarketing from both management and sales reps. Spending time and energy creating such support appears to be critical for success. Firms marketing telemarketing could help assure success by targetting sales organizations who have previously exhibited support for innovation generally. These firms would be ones that have adopted other types of innovative practices in the past. Furthermore, by working to build support for telemarketing among both sales representatives and managers, management can also help improve the likelihood of success of the telemarketing innovation. This support building could be accomplished through training programs, and by exhibiting support for the telemarketing system in all situations. Marketing managers in vendor companies could proact and become involved with the buyer's adoption process – educating the buyer about the need to build management and sales rep support and by committing resources to help the buyer build support for the innovation.

The Resolution of Implementation Issues Hypotheses

As hypothesized, the higher the resolution of implementation issues, the greater the success of telemarketing. While not unexpected, this finding brings needed empirical support to the work of change theorists. The model has related several other variables to the

resolution of implementation issues and found that management support has an important effect on the resolution of implementation issues. Organization differentiation and division of labour are also related to greater resolution of implementation issues.

Practical implications of this finding can usefully be generated for innovative firms and marketers of innovative products. Firms adopting innovations will be more successful if they take steps to plan for the innovation, diagnose and eliminate resistance to change, ensure ability and motivation to undertake the change and evaluate the process. These steps appear to be fundamental to success. Again the proactive role of telemarketing marketers becomes apparent - they could assist adopting firms in carrying out the process of implementing the innovation by alerting, adopting firms as to the critical nature of this step. Since an improved implementation process is likely to enhance success, and success is likely to increase adoption rates and diffusion, it is worthwhile for telemarketing marketers to devote effort to improving the resolution of implementation issues. A commonly expressed view during the interviews, was that implementing telemarketing would be a fairly simple matter - it would not require much if any special effort. In the face of this perception, it is particularly important for adopting managers and vendor management to counter this view and work on resolving
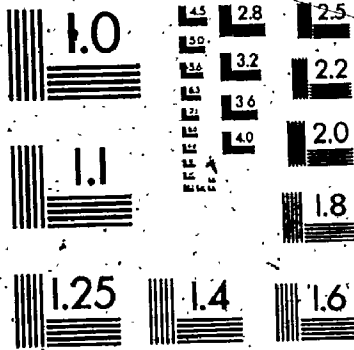
implementation issues during the adoption process.

The Innovation-Organization Match Hypotheses

Compatibility was found to be positively related to support of telemarketing by sales representatives but not by sales management. In assessing the theoretical contribution of this finding one needs to recall that Rogers' (1983) compatibility concept was composed of two dimensions: (1) consistency with past practices and experiences and (2) consistency with current values and needs. This thesis operationalized compatibility as consistency with past practices. Defining compatibility in this fashion seems to take a useful step in our understanding of the concept. If it is reasonable to assume that the second dimension in Rogers' compatibility definition (consistency with current values and needs) is reflected in the two eta variables, RST and MST, then this research has introduced some interesting interrelatonships between the two dimensions of compatibility.

As proposed in the research model, it is interesting that compatibility and reps support for change both positively affect sales reps' support of telemarketing. The rationale underlying the model and supported here is that reps have a need for change but at the same time, this is balanced against a need for consistency with past practices. This same notion as applied to sales management was not

supported. Compatibility had no impact on sales management's support for telemarketing. It is likely that management has less of a need to stay closer to past practices because they are not directly involved in those practices.

The theoretical conclusion is that compatibility as previously defined really appears to be two distinct concepts that play distinct but interrelated roles in the adoption process. Future work is required to focus more clearly on the consistency with the present needs and values dimension.

The main practical implication for telemarketing marketers is to target firms where telemarketing is compatible with previous practices and experience. An assessment of compatibility could be made at an initial contact with a prospective adopter. Compatible firms are likely to be ones where reps can be persuaded to have more positive support for telemarketing. As supported by other portions of the model, this support can be translated into increased success with the innovation. Similarly, from the perspective of the potential adopting firm, knowing that sales rep support is more probable in instances where telemarketing is consistent with past practices, managers may even consider introducing increased telephone sales usage on a fairly informal basis as a precursor to a telemarketing strategy. This approach might enhance the

successful adoption of the program later.

Lastly, Hypothesis 8 - more successful implementation
of telemarketing will occur when telemarketing is used to
perform core applications for the sales force was also
supported. This is a particularly undeveloped idea and
little theory has been proposed regarding the role of
innovations and core applicatons. However the idea was
developed from Yin's (1979) key conclusion that
routinization of an innovation is more likely if the
innovation is used for core functions of the organization.
This research provides additional support for the Yin
hypothesis. Sales organizations that utilize telemarketing
for more of the core sales tasks report more success in its
use. Theoretically, core application appears to be a
concept worth developing in future work.

In fact an argument can be made that one of the most
fruitful directions for future research involves examining
the use of practice innovations. Given the criticism
levelled (by Rogers (1983) and others) at innovation
research for being pro-innovation biased, an even more
commanding argument in support of innovation use research
can be made. What is necessary is a detailed examination of
how telemarketing and/or other practice innovations are used
and for what purposes. The notion of core application could
provide the necessary starting theory for such an
examination.

Of immediate practical interest are the implications of this core use finding for sales managers in firms that have or may yet adopt telemarketing. The conclusion to be drawn from this research (and that of Yin, 1979) is that sales organizations should consider utilizing telemarketing for core activities to improve the likelihood of success. More success appears to occur when telemarketing is widely integrated into core sales tasks. It does not have to replace the current method. In fact most respondents indicated that for most sales tasks, telemarketing was used in conjunction with other methods to accomplish a given task. At this point one can really only offer conjecture as to the reasons for the positive relationship between core use and success. It seems most plausible to advance the idea that by directing an innovation toward central tasks, the organization becomes increasingly committed to its success because these tasks are vital as opposed to peripheral to the firm. It is useful to note that while adoption for core use may be associated with greater success, it may also be more difficult to get a company to adopt telemarketing for a core business function. This idea is worthy of future study - are firms reluctant to adopt practice innovations for core functions or are they more supportive of such innovations?

In concluding this examination of the structural model, it can be said that there is considerable research

support for the individual paths in the research model. As well, the individual model paths supported by the data make theoretical sense and in turn appear to make some contribution to the theory on which they were based.

At this point in the examination of the model, it is useful to assess the strength of various relationships and specify the most important findings in the study. An examination of the standardized coefficients, leads one to conclude that the most important success factors are resolution of implementation issues and management support of telemarketing. It appears that management support of telemarketing has a strong impact on resolution of implementation issues ($\beta = .83$). In turn, it is critical for firms to resolve implementation issues to achieve success ($\beta = .57$). The effects of the other variables are considerably less important in achieving success.

Overall, the revised model provides a good grounding for future research which should ideally be of a longitudinal nature so causal conclusions can be drawn with greater confidence. The caveat noted in Chapter 4 – that all findings must be viewed as preliminary until tested in a longitudinal or experimental setting bears repeating at this point.

Implications for Theory

Before drawing theoretical implications, the question of the generalizability of the research findings needs to be addressed. Because the sample was randomly selected from a fairly comprehensive sampling frame, the results are readily generalizable to the population of all industrial Ontario salesforces in medium-sized companies in the manufacturing and wholesaling distribution sectors that have adopted telemarketing. Beyond that, it is probably safe to generalize from the Ontario to the North American scene.

It is the view of the researcher that findings could be cautiously generalized outside the realm of the telemarketing innovation to other comparable practice innovations. Innovations can be checked for comparability by examining the typology categories and characteristics attributed to telemarketing in Chapter 1. Some examples of comparable innovations might include national account selling, or computer information system practices. Specifically, the use of portable computers by sales reps to store and organize sales and marketing information is a recent sales practice innovation (Peters, 1984). The use of computer software to provide sales reps with specific strategies for different customer types is a second example (Golden, 1984). A most dramatic example of a recent practice innovation is computer-to-computer marketing that has been adopted by several innovative American firms in the

food industry (Huguet, Jr.,1984). This innovation means that computers make more buying and selling decisions thus limiting buyer/seller contacts and affecting the sales force's organizaton structure and customer contact. The computer-to-computer sales innovation can be viewed as the logical future extension of telemarketing as researched here.

The theoretical implications of each individual hypothesis have been noted in assessing the structural model above. In summary the research findings do not support the need for organizations to be structurally ambidextrous as they proceed through the innovation adoption process. There has been widespread speculation that different structural forms were most appropriate during different stages of the process. In previous studies, formalization has been found to be negatively related to initiation and adoption. This study found it to be negatively related to successful implementation. Division of labour and differentiation have been found to be positively related to initiation and adoption; this study found them to be positively related to quality of the implementation process. Only the findings on centralization oppose this anti-ambidextrous conclusion.

The findings that three variables, management and sales rep support for the innovation, and resolution of implementation issues play critical roles in success is not particularly new. Management support affects the resolution

of implementation issues, the support of the sales representative - the individual whose job is directly affected by the innovation appears to <u>directly</u> affect success. The resolution of implementation issues has a powerful effect on success. The theoretical contribution here has been to build these concepts into an innovation model and to propose and find support for interrelationships. The research intention regarding the core use and compatibility constructs was to take two relatively murky concepts and attempt to improve their clarity and determine if they are worthy of future research attention. The encouraging findings reported in Chapter 4, point to the usefulness of these two concepts in the model developed here. The initial step in clarifying and operationalizing these variables was fruitful but scholars need to continue using these concepts - working toward more theoretical clarity in future work.

On a more macro level, the fact that the model appears to be moderately successful in explaining innovation success has implications for innovation theory and for sales management theory. For innovation theory, the model can operate as a base for future model-building focussing on organization innovation success. It should be modified and tested in other settings. As well, it is a useful complement to the established knowledge of innovation in the pre-adoption phase of the innovation adoption process.

For sales management theory, the model is specifically formulated for the sales organization setting. Marketing theory has recently begun to focus on organizational factors - for example, the effect of organizational structure on marketing planning (John and Reve, 1984). This research is part of that body of theoretical interest. It complements our fairly established knowledge of salesforce motivation. (Churchill, Ford and Walker, 1976; Churchill, Ford and Walker, 1979) and sales productivity (Cravens, and Woodruff, 1973; Lucas, Weinberg and Clowes, 1975; Beswick and Cravens, 1977; Ryans and Weinberg, 1979), which have been the traditional domains of sales management theory. In the quest for improved sales productivity, sales force innovations such as those mentioned earlier are going to become an integral part of sales practice. Sales management theory to guide practicing managers will be very valuable.

Implications For Marketing Managers

The managerial implications of each hypothesis were noted in the assessment of each hypothesis above. In drawing implications for marketing managers, it is particularly important to be reminded of the non-experimental nature of the study. All recommendations to practicing managers must be considered less than definitive. However, these preliminary implications can be useful given the current innovative climate and the accompanying need for guidelines for marketing managers who are likely to at least consider the adoption of one of the current sales practice innovations.

Sales managers who have adopted or are considering adopting innovations can be encouraged. The path to successful innovation adoption is not too difficult nor is it radically different from what might seem like the intuitively obvious route.

First, those organizations that can identify themselves as exuding an overall support for innovation appear to be in an especially good position. This general support will likely translate into support for the specific innovation in question (telemarketing or some other innovation). Managers could build support for a specific innovation by creating a climate that is supportive toward innovation. If that climate already exists, those companies

are likely to be successful innovators.

Second, those organizations whose previous practices are compatible with the innovation are likely to have more support from sales reps for the innovation. Generalizing somewhat, this probably means that employees directly affected by the innovation will give greater support if the innovation is at least somewhat similar to past practices. Managers could enhance opportunities for success by trying to implement innovations that build on previous behaviours. If a manager was interested in a specific innovation that was not compatible, he/she could attempt to build that compatibility before adopting the innovation. For example, using computers for fairly simple and routine tasks might be a useful precursor to adopting computer software for the purpose of developing sales strategies by sales reps.

Management and sales rep support of the innovation are very important factors in success. Spending time and other resources building support for the innovation appears to be worthwhile and necessary for success. One of the simplest ways to build support is through educating management and sales representatives about the innovation - its strengths and weaknesses and intended effects on the work of all employees.

Special attention should be paid to handling the process of implementation of the innovation. As suggested

by the change theorists, planning, attempting to identify
and offset resistance to change, motivating and evaluating
the change are all ingredients in a successful change
effort. Although these activities may seem unnecessary for
what might be seen as a simple innovation, they have a
significant impact on success.

In planning, managers should plan to use the
innovations for core tasks of the organization. In thinking
about how to use an innovation such as telemarketing, a
manager would likely have greater success if he/she
incorporated the innovation by using it for core sales
activities rather than relegating it to a peripheral status
by using it for new or different tasks. Making core use of
an innovation necessarily involves changing the work
routines of core employees so careful planning for this
change in work appears critical in the success of the
innovation.

Lastly, the findings regarding organization structure
are difficult to translate into actionable recommendations
for managers because organization structure is not easily
altered in the short-run. As well, the existing structure
may work very well for every other aspect of the
organization's work so it may not be advisable to alter it
solely for innovation success. However, knowledge about the
probable effects of structural variables on success can be
of some use to managers who may at least benefit from

assessing these affects in their own organizations.

Managers can recognize that higher centralization, but lower

formalization, has positive effects on success. A high

degree of differentiation and division of labour positively

relate to resolution of implementation issues. It may be

possible to impose a higher degree of centralization and/or

a lower degree of formalization on the sales organization

during the innovation implementation phase.

Recommendations can also be made to firms attempting

to market some of the innovations referred to earlier.

Greater success on the part of the customer (adopter) is

likely to enhance diffusion of innovations so sellers can

benefit from increasing the rate of successful innovation

adoption in firms. Marketers could target firms where the

innovation appears to be more compatible with existing

practices. They could also assist in building management

and user support for the innovation and in improving the

resolution of implementation issues in adopting firms. In

making recommendations for innovation use, they could

encourage the use of the innovation for the organization's

core or key tasks. These findings imply that marketers take

a fairly strong proactive role in their client's adoption

process. A high degree of involvement and support in these

areas should pay off in success and increased diffusion.

The implications for theory and practice must be

presented in conjunction with an appraisal of the strengths

and weaknesses of the study. As with any preliminary research, it is essential to understand these issues if one is to judge how much confidence one can have in the implications.

The Research Strengths and Weaknesses: Some Suggestions For Future Research

Many of the research strengths and flaws have been alluded to or assessed in the major body of the thesis. This final section will summarize the main points and present directions for future work which can hopefully overcome the problems which have been identified.

The broad approach taken in the thesis, developing a model incorporating a fairly large number (12) of latent variables as opposed to modeling only two or three variables is the source of several strengths and weaknesses. On the positive side, this approach enabled the researcher to determine what factors and paths in the model were significant and worthy of emphasis in future research effort. Since model development in the area of organization innovation adoption is at a early stage of development, this approach was deemed appropriate.

The trade-off in selecting this broad approach was depth of measurement of several constructs. To keep the interview to a reasonable time limit, the items measuring management and sales rep support of innovation and

management support of telemarketing were comparatively few
in number. Following item factor analysis, the management
support of innovation and management support of
telemarketing scales were reduced to one item. These
constructs were found to play an important role and future
research should be directed toward better measurement of
these variables.

On the positive side of measurement, considerable
effort was expended on measuring success. This effort
appears to have paid off. All ten measures of success were
very consistent and the LISREL analysis strongly supports
the notion that all ten measures were indicators of the same
underlying construct. As recommended earlier, this finding
could be useful to future researchers seeking to measure
success.

The research design also had strengths and weaknesses.
The sampling frame was a strength. It allowed the selection
of a random sample of firms in a field where identification
of innovation adopters would have been difficult. In fact,
identification of firms who have adopted selected
innovations will be a critical but probably difficult
problem for future researchers. The approach taken here, of
working with a marketer of the innovation solves the problem
but can be a very time consuming process. Other approaches
might be to work with industry associations. To study
telemarketing for example, one might work with the Canadian

Direct Marketing Association to identify companies that have
adopted telemarketing.

Another strength of the design was the collection of
data from strategic and implementer key informants. The
researcher did not have to rely on a single respondent's
view of telemarketing adoption and success. A weakness in
design involved the cross-sectional nature of data
collection. Recall was required on the part of respondents.
Greater confidence could be placed in the causal links
proposed in this research if a longitudinal design was
implemented. Because the research is a naturalistic field
survey, it is not possible to infer causality with the
certainty that experimental manipulation affords. Since
field experiments would be very difficult to design, a
longitudinal study offers the greatest promise for the next
step in future research.

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APPENDIX A — The Contact Letter

Dear   :

Many companies have been troubled with the high cost of direct sales efforts. To find an effective way to solve this problem, a team of researchers at the Business School from the University of Western Ontario is conducting a study on the use of telemarketing by sales forces in Canada. We consider Phone Power to be an example of telemarketing.

Since your company is one of the first in Canada to have adopted this new marketing tool, we can learn a great deal from talking with you about your company's experiences with Phone Power. As a pioneer in the sales field, your views are doubly important to this study. In return, as a participant in the study, you will be sent a summary report of insights gained from the research.

Within a week or so, you will receive a call from a member of our research team at the Business School. We would like to interview you by telephone - the interview should take about 20-30 minutes. You can be assured of complete confidentiality. Information gathered from the interviews will be aggregated and no information on individual organizations or people will be divulged.

I really appreciate your assistance as your help is essential to the study's success.

Sincerely,

Judith Marshall
Ph.D Candidate and Project Director

APPENDIX B - The Interview Schedule

TO BE COMPLETED BEFORE BEGINNING THE INTERVIEW

NAME OF CONTACT _____

POSITION _____

DIVISION _____

COMPANY _____

ADDRESS _____

COMPANY SALES _____

TELEMARKETING APPLICATION 1 _____

TELEMARKETING APPLICATION 2 _____

TELEMARKETING APPLICATION 3 _____

ADOPTION DATE _____

MAKE NOTE OF SEVERAL POINTS IN QUESTIONNAIRE BEFORE
BEGINNING - QUESTION 1 - NOTE IF DIVISION GIVEN
AT TOP OF PAGE ONE.

DATE OF INTERVIEW _____

SIC _____

REVENUE SUBMITTED _____

OF COMPANY EMPLOYEES _____

RESPONSE SHEET

CALL ONE _____
      DATE   TIME
      _____REACHED   _____NOT REACHED
                           CALL BACK TIME _____

CALL TWO _____
      DATE   TIME
      _____REACHED   _____NOT REACHED
                           CALL BACK TIME _____

CALL THREE _____
      DATE   TIME
      _____REACHED   _____NOT REACHED

RESPONDENT AGREES   _____

   RESPONDENT TOO BUSY NOW   _____

   CALLBACK INTERVIEW

      DATE _____
      TIME _____
      NUMBER _____

RESPONDENT REFUSED

      TOO BUSY _____
      NOT INTERESTED _____
      OBJECTS TO SURVEYS _____
      NOBODY'S BUSINESS _____
      OTHER _____
              _____
              _____

INTRODUCTION

Hello, may I speak with _____ please?

IF ASKED "WHO SHOULD I SAY IS CALLING?"

Its (YOUR NAME) from the University of Western Ontario.

(IF X IS NOT AVAILABLE, when would be a good time to reach him?
_____ (NOTE TIME))

WHEN X IS ON THE PHONE:

Hello Mr.xxx, this is (YOUR NAME) from the Business School at the
University of Western Ontario. Last week, we sent you a letter
explaining a little about our telemarketing study. Did you receive
the letter?

YES ___   NO ___ (GO TO TOP OF NEXT PAGE.)

I.IF YES (IE. LETTER WAS RECEIVED),
Oh good. As we indicated in the letter, we are
conducting a study of how telemarketing is used by companies across
Canada. We consider Phone Power to be an example of telemarketing
and we understand that your company has participated in one of Bell
Canada's Phone Power Programs, is that right?

IF NECESSARY, PROMPT WITH PHONE POWER DEFINITION.

YES ___

MAY SAY THEY DON'T USE IT ANYMORE -

IF SO, SAY- Actually we want to talk
with you especially - to learn what
your experiences were.

I'd like to interview you about your
company's experiences with Phone Power- the
questions I need to ask should take about
20-30 minutes, if that sounds all right?
YES ___ (PROCEED)   NO, I'M TOO BUSY NOW ___
                    SAY: Can we set up a time that would
                    be alright with you? DATE _____
                                         TIME _____

NO ___ ATTEMPT TO OVERCOME OBJECTIONS.
IF CAN'T, CONCLUDE INTERVIEW BY ASKING:

NO ___

IF NO, TERMINATE THE
INTERVIEW WITH:
Thank-you very much for
your help. We really want
to talk with companies
who have used
telemarketing,so we won't
take up more of your
time. Good-bye.

Can you recommend someone else in your company that we might
talk with?   NO _____   YES _____
                               NAME _____
                               POSITION _____
                               PHONE _____
Thank-you very much. Good-bye.

II. **IF NO,** (IE. LETTER WAS NOT RECEIVED)
I'm sorry yours didn't reach you. A group from the Business
School at the University of Western Ontario is conducting a survey
on the use of telemarketing by sales forces in Canada.
In the letter, we explained a little about the study and indicated we
would be calling.
      We would like to learn about your company's use of telemarketing.
In using this term, we mean the planned use of the telephone and/or
other telecommunications in the selling of goods and services.
We consider Phone Power to be an example of telemarketing.
This study is designed to provide information on how
businesses like yours can increase sales productivity by using
the telephone in selling activities. As a respondent in the study
you would be sent a summary report of our findings if you wished.
We understand that your company has participated in one of Bell
Canada's Phone Power Programs, is that right?

MAY NEED TO PROMPT WITH PHONE POWER DEFINITION

┌ YES ____

MAY SAY THEY DON'T USE IT ANYMORE -

IF SO, SAY- Actually we want to talk
with you especially - to learn what
your experiences were.

┌ NO ____

IF NO, TERMINATE THE
INTERVIEW WITH:
Thank-you very much for
your help. We really want
to talk with companies
who have used
telemarketing, so we won't
take up more of your
time. Good-bye.

I'd like to interview you about your
company's experiences with Phone Power- the
questions I need to ask should take about
20-30 minutes. You can be assured of compelete
confidentiality. Information gathered from the
interviews will be aggregated and no information
on individual organizations or people will be
divulged. We could do the interview right now if
that sounds all right?

YES ___ (PROCEED)   NO, I'M TOO BUSY NOW ____
                       |
                       SAY: Can we set up a time
                       that would be alright with
                       you? DATE _____
                              TIME _____

NO ___ ATTEMPT TO OVERCOME OBJECTIONS.

IF CAN'T, CONCLUDE INTERVIEW BY ASKING:

Can you recommend someone else in your company that we might
talk with?   NO _____   YES ____
                            |
                            NAME _____
                            POSITION _____
                            PHONE _____

Thank-you very much. Good-bye.

FILL OUT RESPONSE SHEET

NOTE TIME _____

BEGIN THE INTERVIEW BY SAYING: Before we start talking about your use
of Phone Power specifically, I'd like to ask a few general
questions about your company and its salesforce.

WRITE IN BEFORE THE INTERVIEW.
REFER TO COVER PAGE. DIVISION GIVEN _____
                    DIVISION NOT GIVEN _____

ASK ALL RESPONDENTS:

1. What are the major product types that your (company/division)
sells?
REFER TO NOTE ABOVE - IF DIVISION IS GIVEN, USE THE TERM DIVISION
THROUGHOUT QUESTIONNAIRE AND IF NOT USE COMPANY.

FOR EACH CATEGORY, ASK, What is the price range for xxx?

GENERAL PRODUCT CATEGORY PRICE RANGE   COMMENTS

1) _____

2) _____

3) _____

4) _____

2. Is your company organized into separate divisions for different
products?

NO _____ GO TO Q3. ┌── YES _____

      (b) IF YES, What division(s) tried a Phone Power
      Program?

      _____

      _____

IF MORE THAN ONE PHONE POWER PROGRAM MENTIONED,
ASK THE RESPONDENT TO ALWAYS THINK ABOUT THE FIRST PHONE POWER
PROGRAM WHEN RESPONDING TO THE REST OF THE QUESTIONNAIRE.

3. I'd like you to think back to the time {{before}} you began your first Phone Power Program. I'll read a short list of selling methods. Please tell me which methods your company/division used to sell your products.

IF NECESSARY, DEFINE PHONE POWER PROGRAMS HERE.

CIRCLE MORE THAN ONE IF APPROPRIATE AND READ THE LIST BELOW.

Did your company use:

(1) outside company salesforce - GO TO Q4.
(2) inside order desk
(3) distributors
(4) agent.   IF ANY OF THESE ARE CIRCLED BUT NOT (1)
(5) catalogue   GO TO Q10.
(6) other methods?

        What were they? _____

        _____

        IF OUTSIDE SALESFORCE,

        4. Before Phone Power, how many full-time outside sales people did you have?

            _____ (WRITE IN APPROPRIATE NUMBER)

        5. Before trying Phone Power, on average, what percentage of time did the outside sales people use the telephone in selling?

        CIRCLE THE APPROPRIATE CATEGORY AND PROMPT IF NECESSARY

        (1) 0%
        (2) Between 0 and 25%
        (3) Between 26 and 49%
        (4) About 50%
        (5) Between 51 and 75%
        (6) Between 76 and 99%
        (7) 100%
        (8) Don't Know

6. Before Phone Power, did you have more than 1 type of nonmanagement sales people, such as technical or senior and junior reps?

NO _____   YES _____
                      |
                      ↓
         What were these types?

             (1) JUNIOR SALES REPS   (4) TERRITORY MANAGERS
             (2) SENIOR SALES REPS   (5) NATIONAL ACCOUNT MANAGERS
             (3) TECHNICAL SALES REPS   (6) OTHER _____

         _____

7. Before Phone Power, how many sales offices did your company/division have?

_____ (WRITE IN APPROPRIATE NUMBER)

8. We're interested in how sales management was organized in your firm, did you have

(1) office or branch sales managers?
(2) regional sales managers?
(3) national sales managers?
(4) other sales managers that I haven't mentioned?

_____

9. Before Phone Power, did you have any sales support people such as:

(1) order processors
(2) customer service people
(3) expeditors
(4) data inputers
(5) any other support? _____

_____

For the next series of questions, I'd like you to forget about
how you currently think about Phone Power and put yourself
back to the time before trying Phone Power.

We'll use a 7 point scale for these questions. For these
7 point scales, its useful to think that 1 is generally negative, 7 is
positive.

10. At the time before trying Phone Power, how efficient
did you think your old ways of selling were?
Could you give me a number on a scale from 1 to 7, where 1 is very
inefficient and 7 is very efficient.

VERY INEFFICIENT   VERY EFFICIENT
1   2   3   4   5   6   7

11. Before trying Phone Power, what number best describes the need
you had for a change in selling procedures? 1 is very weak need
for change and 7 is very strong need for change.

VERY WEAK   VERY STRONG
NEED   NEED
FOR CHANGE   FOR CHANGE

1   2   3   4   5   6   7   DON'T KNOW ____

12. What number best describes the need sales people had for a change in personal selling procedures before your company tried Phone Power?

VERY WEAK   VERY STRONG
NEED FOR   NEED FOR
CHANGE   CHANGE

1   2   3   4   5   6   7

13. Before you tried Phone Power, from an overall cost/benefit point of view, how attractive did you think Phone Power was going to be? 7 is very attractive and 1 is very unattractive.

VERY UNATTRACTIVE   VERY ATTRACTIVE
1   2   3   4   5   6   7

14. Before trying Phone Power, what overall effect did you think it would have on customer relationships? Using a scale from 1 to 7, 7 is a very positive effect, 1 is a very negative effect.

VERY NEGATIVE   VERY POSITIVE
1   2   3   4   5   6   7

15. Before trying Phone Power, what overall effect did the sales people think Phone Power would have on customer relationships? Using a scale from 1 to 7, 7 is a very positive effect and 1 is a very negative effect.

VERY NEGATIVE   VERY POSITIVE
1   2   3   4   5   6   7   DON'T KNOW ____

16. What number best described your thoughts about how well
Phone Power could answer your overall needs for change at
the time you adopted it?

VERY NEGATIVE   VERY POSITIVE
1   2   3   4   5   6   7

17. What number best described the sales people feelings about
Phone Power being able to answer their overall needs for change at
the time you tried Phone Power?

VERY NEGATIVE   VERY POSITIVE
1   2   3   4   5   6   7   DON'T KNOW _____

18. Who in the company made the final decision to adopt
Phone Power?
(1) RESPONDENT
(2) PRESIDENT

_____

_____

19. Did any others have significant input to the final decision?

(1) NO   (2) YES
                   ↓
               How many? _____

20. Using a scale from 1 to 7, where 1 is very low support
and 7 very high support, what number best describes the support
given by the sales management people to the development of
Phone Power?

LOW SUPPORT   HIGH SUPPORT
1   2   3   4   5   6   7

I'll read a short series of statements, could you tell me whether each statement was true or false in your company.

21. We set specific goals for Phone Power at the very beginning.

    T   F

22. We encountered some resistance to Phone Power from customers that we didn't expect once we actually started using it.

    T   F

23. We encountered some internal resistance to Phone Power, that we didn't expect once we actually started using it.

    T   F

24. Before starting Phone Power, we planned methods of overcoming possible resistance to Phone Power by customers.

    T   F

25. Before starting Phone Power, we planned methods of overcoming possible resistance to Phone Power, by sales people.

    T   F

26. When we started Phone Power, we had a clear cut plan to guide us.

    T   F

27. We have done a formal evaluation of Phone Power.

    T   F

28. We're interested in talking about what activities you used Phone Power for, when you first began using it? Did you use it for xxx? GO THROUGH EACH APPLICATION BELOW AND CIRCLE THE APPROPRIATE CATEGORIES.

(b) FOR EACH TASK NAMED, ASK: How did you do xxx before you began Phone Power?

(c) FOR EACH ACTIVITY NAMED, ASK: How successful would you say Phone Power is for xxx?

(A) POSSIBLE APPLICATION When you first started Phone Power, Did you	PERFORMED BEFORE How did you do xxx before using Phone Power?	You Indicated You Use Phone Power for xxx. Using a scale where 1 is very unsuccessful and 7 is very successful, how successful would you say Phone Power is for xxx? ASK FOR EACH TASK THEY USE IT FOR
(1) ORDER TAKING	HOW? _____ DIDN'T	1 2 3 4 5 6 7
(2) MAKING PRODUCT INFO AVAILABLE	HOW? _____ DIDN'T	1 2 3 4 5 6 7
(3) COMPLAINT HANDLING	HOW? _____ DIDN'T	1 2 3 4 5 6 7
(4) GENERATING SALES LEADS	HOW? _____ DIDN'T	1 2 3 4 5 6 7
(5) QUALIFYING SALES LEADS	HOW? _____ DIDN'T	1 2 3 4 5 6 7
(6) SUPPORTING FIELD SALES STAFF	HOW? _____ DIDN'T	1 2 3 4 5 6 7
(7) ACTIVATING INACTIVE ACCOUNTS	HOW? _____ DIDN'T	1 2 3 4 5 6 7
(8) OPENING NEW ACCOUNTS	HOW? _____ DIDN'T	1 2 3 4 5 6 7
(9) HANDLING MARGINAL ACCOUNTS	HOW? _____ DIDN'T	1 2 3 4 5 6 7
(10) FULL ACCOUNT MANAGEMENT	HOW? _____ DIDN'T	1 2 3 4 5 6 7
(11) OTHER	HOW? _____ DIDN'T	1 2 3 4 5 6 7

FOR THOSE WHO HAVE DISCONTINUED – USE PAST TENSE BELOW

ASK ALL RESPONDENTS

29. When you first began using Phone Power, were you using it with your existing customers or did you target different new ones?

(1) EXISTING CUSTOMERS   (2) NEW CUSTOMERS

COMMENTS _____

IF NEW CUSTOMERS.
What new customers did you use Phone Power for?

_____

_____

30. Did you use Phone Power for all your product line or only certain products?

(1) ALL   (2) CERTAIN PRODUCTS ONLY

Which ones? _____

_____

COMMENTS _____

_____

31. Using a scale of 1 to 7, where 1 is no change and 7 is very high change, what number best describes the extent of change Phone Power caused in the work routines and procedures of outside sales people?

NO   VERY HIGH
CHANGE   CHANGE

1   2   3   4   5   6   7

32. If you count all employees who spend one-third or more of their time on Phone Power as telemarketing sales reps, when you first began Phone Power, how many telemarketing sales reps did you have?

_____ (WRITE IN APPROPRIATE NUMBER)

COMMENTS _____

_____

33. (a) At present, how many of these people do you have?

_____ (WRITE IN APPROPRIATE NUMBER)

IF ZERO REPS NOW:
Why did you discontinue telemarketing?

_____

_____

IF FEWER REPS NOW:
Why did you cut back on the number of telemarketing reps since you first began telemarketing?

_____

_____

IF MORE REPS NOW:
Why did you increase the number of telemarketing reps since you first began telemarketing?

_____

_____

IF MORE THAN NONE,

(b) How many telemarketing supervisors do you have now?

_____ (WRITE IN APPROPRIATE NUMBER)

FOR THOSE WHO STILL HAVE PHONE POWER - USE SECTION A QUESTIONS

FOR THOSE WHO HAVE DISCONTINUED PHONE POWER - USE SECTION B QUESTIONS

SECTION A

34. Overall, would you say that your salesforce's use of Phone Power since first implementing it has:

(1) increased
(2) decreased
(3) stayed about the same

35. What type of telemarketing training do you give?

_____

_____

        PROBE AS NECESSARY

        (1) ON THE JOB ONLY
        (2) PHONE POWER SEMINAR
        (3) SEMINARS CONDUCTED BY OUTSIDE SPECIALISTS
        (4) COMPANY PROVIDED SEMINARS?

36. In describing the job of your telemarketing sales people, would you say that:

(1) telemarketing responsibilities are only a small part of their jobs
(2) telemarketing responsibilities are a major part of their jobs
(3) other _____

_____

37. On what basis do you measure their job performance?

(1) FOR TELEMARKETING SALES
(2) FOR COMPLETING ASSIGNED TELEMARKETING ACTIVITIES - NOT NECESSARILY SALES.
(3) FOR OTHER ACTIVITIES UNRELATED TO TELEMARKETING
(4) OTHER _____

(b) How are they paid (salary, commissions, bonus or combination)?

_____

_____

38. What office arrangements have been made for the telemarketing staff?

PROBE IF NECESSARY

(1) SPECIAL TELEMARKETING FACILITIES HAVE BEEN ARRANGED
(2) TELEMARKETING REPS CALL FROM REGULAR DESKS WHERE THEY
    DO OTHER JOBS SUCH AS SALES OR CLERICAL
(3) OTHER _____

_____

39. Are there any written instructions for how telemarketing
or Phone Power reps should do their jobs?

(1) NO - GO TO Q40   (2) YES

COMMENTS _____

   IF YES,

        On a scale from 1 to 7, if 1 is considered very general
        guidelines, and 7 very specific guidelines, what number
        best describes these guidelines for telemarketing reps?

        VERY GENERAL   VERY SPECIFIC

          1   2   3   4   5   6   7

40. In your opinion, has there been resistance of any sort by department personnel in using Phone Power?
(1) NO   (2) YES

       IF YES, what sort of resistance?

_____

_____

       What were the steps taken to counter this resistance?

_____

_____

41. (a) Is there any type of company sales manual to help outside sales reps do their jobs?

(1) NO   (2) YES
         ↓

       (b) If we use a scale where 7 is very complete, and 1 is very vague, how detailed would you say this manual is?

       VERY VAGUE   VERY COMPLETE
        1   2   3   4   5   6   7

42. Do any written guidelines exist for <u>outside</u> sales reps for:

(1) how to identify potential customers targeted by the company
(1) NO   (2) YES   (3) DON'T KNOW

(2) how often to call upon customers
(1) NO   (2) YES   (3) DON'T KNOW

(3) level of customer service to be extended
(1) NO   (2) YES   (3) DON'T KNOW

(4) preparing and presenting sales presentations on customer calls
(1) NO   (2) YES   (3) DON'T KNOW

43. Who makes the decisions about the final price of your products to your customers?

PROBE WITH THE FOLLOWING IF NECESSARY.

(1) THE SALES PEOPLE
(2) DISTRICT OR BRANCH SALES MANAGER
(3) REGIONAL SALES MANAGER
(4) THE NATIONAL SALES MANAGER
(5) THE MARKETING VICE PRESIDENT
(6) HEAD OFFICE
(7) ITS FLEXIBLE?

NOTES IF APPROPRIATE _____

_____

44. Who makes decisions about hiring new outside sales staff?

PROBE IF NECESSARY

(1) THE SALES PEOPLE
(2) DISTRICT OR BRANCH SALES MANAGER
(3) REGIONAL SALES MANAGER
(4) THE NATIONAL SALES MANAGER
(5) THE MARKETING VICE PRESIDENT
(6) OR SOMEONE ELSE? _____

_____

NOTES IF APPROPRIATE _____

_____

45. Who makes decisions about the proportion of outside sales people's time to be spent on active accounts, new account development and marginal accounts?

(1) THE SALES PEOPLE
(2) DISTRICT OR BRANCH SALES MANAGER
(3) REGIONAL SALES MANAGER
(4) THE NATIONAL SALES MANAGER
(5) THE MARKETING VICE PRESIDENT
(6) OR SOMEONE ELSE? _____

_____

NOTES IF APPROPRIATE _____

_____

46. Who establishes outside sales people's quotas?

(1) THE SALES PEOPLE
(2) DISTRICT OR BRANCH SALES MANAGER
(3) REGIONAL SALES MANAGER
(4) NATIONAL SALES MANAGER
(5) MARKETING VICE PRESIDENT
(6) SOMEONE ELSE? _____

_____

NOTES IF APPROPRIATE _____

_____

47. Who establishes the performance criteria that outside sales people are evaluated upon?

(1) THE SALES PEOPLE
(2) DISTRICT OR BRANCH SALES MANAGER
(3) REGIONAL SALES MANAGER
(4) NATIONAL SALES MANAGER
(5) MARKETING VICE PRESIDENT
(6) SOMEONE ELSE _____

_____

NOTES IF APPROPRIATE _____

_____

48. How would you describe your sales department's past practices of trying new selling approaches? If we use a scale from 1-7, where 7 means you have a history of being a leader in adopting new sales approaches, and 1 means you're very cautious and seldom adopt new sales approaches, what number best describes your company?

SELDOM ADOPTS   A LEADER
1   2   3   4   5   6   7

49. Overall, if 7 is very successful, and 1 is not successful at all, how successful would you say that telemarketing or Phone Power has been in your company?

VERY UNSUCCESSFUL VERY SUCCESSFUL

1 2 3 4 5 6 7

NOTE TIME: _____

I'd like to conclude the questionnaire by asking what your present title or position is:

_____

How long have you been with company _____?

_____

This wraps up all the specific questions I wanted to ask you about telemarketing. Do you have some comments you'd like to add or any questions?

_____
_____
_____
_____

I'd like to thank you very much for your help and cooperation and before concluding would like to ask if you could recommend 1 or 2 others in your division/company knowledgable about Phone Power that I could also interview.
An implementation perspective to compelement your strategic management one would be really helpful.

NUMBER ONE RECOMMENDED

NAME _____
POSITION _____
TELEPHONE _____

QUALIFY THIS PERSON BY ASKING:
Was he/she with your company when the Phone Power decision was made?

(1) NO   (2) YES- ASK: Can you recommend another?
    |
    |
    └──→ IF NO, ASK: Can you think of someone else who was
         with your company when the Phone Power decision
         was made that you could recommend?

         NAME _____
         POSITION _____
         TELEPHONE _____

Could you recommend another?

NAME _____

POSITION _____

TELEPHONE _____

QUALIFY THIS PERSON BY ASKING:
Was he/she with your company when the Phone Power decision
was made?
(1) NO   (2) YES

       └──→ IF NO, ASK: Can you think of someone else who was
            with your company when the Phone Power decision
            was made?

            NAME _____

            POSITION _____

            TELEPHONE _____

Thank-you very much for your help in completing this study.
We really appreciate your comments. Good-bye

SECTION B

34. When did your company discontinue Phone Power?

_____

_____

35. What type of telemarketing training did you give?

_____

_____

       PROBE AS NECESSARY

       (1) ON THE JOB ONLY
       (2) PHONE POWER SEMINAR
       (3) SEMINARS CONDUCTED BY OUTSIDE SPECIALISTS
       (4) COMPANY PROVIDED SEMINARS?

36. In describing the job of your telemarketing sales people, would you say that:

(1) telemarketing responsibilities were only a small part of their jobs
(2) telemarketing responsibilities were a major part of their jobs
(3) other _____

_____

37. On what basis did you measure their job performance?

(1) FOR TELEMARKETING SALES
(2) FOR COMPLETING ASSIGNED TELEMARKETING ACTIVITIES – NOT NECESSARILY SALES.
(3) FOR OTHER ACTIVITIES UNRELATED TO TELEMARKETING
(4) OTHER _____

(b) How were they paid (salary, commissions, bonus or combination)?

_____

_____

38. What office arrangements were made for the telemarketing staff?

PROBE IF NECESSARY

(1) SPECIAL TELEMARKETING FACILITIES WERE ARRANGED
(2) TELEMARKETING REPS CALLED FROM REGULAR DESKS WHERE THEY
    DID OTHER JOBS SUCH AS SALES OR CLERICAL
(3) OTHER _____

_____

39. Were there any written instructions for how telemarketing
or Phone Power reps should do their jobs?

(1) NO - GO TO Q40   (2) YES

COMMENTS _____

    <u>IF YES,</u>

    On a scale from 1 to 7, if 1 is considered very general
    guidelines, and 7 very specific guidelines, what number
    best describes these guidelines for telemarketing reps?

    VERY GENERAL   VERY SPECIFIC.

      1 2 3 4 5 6 7

40. In your opinion, was there resistance of any sort by department personnel in using Phone Power?
(1) NO   (2) YES
          IF YES, what sort of resistance?

_____

_____

          What were the steps taken to counter this resistance?

_____

_____

41. (a) Is there any type of company sales manual to help outside sales reps do their jobs?

(1) NO   (2) YES
            ↓
          (b) If we use a scale where 7 is very complete, and 1 is very vague, how detailed would you say this manual is?

          VERY VAGUE   VERY COMPLETE
               1.   2   3   4   5   6   7

42. Do any written guidelines exist for <u>outside</u> sales reps for:

(1) how to identify potential customers targeted by the company
(1) NO   (2) YES   (3) DON'T KNOW

(2) how often to call upon customers
(1) NO   (2) YES   (3) DON'T KNOW

(3) level of customer service to be extended
(1) NO   (2) YES   (3) DON'T KNOW

(4). preparing and presenting sales presentations on customer calls
(1) NO   (2) YES   (3) DON'T KNOW

43. Who makes the decisions about the final price of your products to your customers?

PROBE WITH THE FOLLOWING IF NECESSARY.

(1) THE SALES PEOPLE
(2) DISTRICT OR BRANCH SALES MANAGER
(3) REGIONAL SALES MANAGER
(4) THE NATIONAL SALES MANAGER
(5) THE MARKETING VICE PRESIDENT
(6) ITS FLEXIBLE?

_____

_____

_____

44. Who makes decisions about hiring new outside sales staff?

PROBE IF NECESSARY

(1) THE SALES PEOPLE
(2) DISTRICT OR BRANCH SALES MANAGER
(3) REGIONAL SALES MANAGER
(4) THE NATIONAL SALES MANAGER
(5) THE MARKETING VICE PRESIDENT
(6) OR SOMEONE ELSE? _____

_____

NOTES IF APPROPRIATE _____

_____

45. Who makes decisions about the proportion of outside sales people's time to be spent on active accounts, new account development and marginal accounts?

(1) THE SALES PEOPLE
(2) DISTRICT OR BRANCH SALES MANAGER
(3) REGIONAL SALES MANAGER
(4) THE NATIONAL SALES MANAGER
(5) THE MARKETING VICE PRESIDENT
(6) OR SOMEONE ELSE? _____

_____

NOTES IF APPROPRIATE _____
_____

46. Who establishes outside sales people's quotas?

(1) THE SALES PEOPLE
(2) DISTRICT OR BRANCH SALES MANAGER
(3) REGIONAL SALES MANAGER
(4) NATIONAL SALES MANAGER
(5) MARKETING VICE PRESIDENT
(6) SOMEONE ELSE? _____

_____

NOTES IF APPROPRIATE _____
_____

47. Who establishes the performance criteria that outside sales people are evaluated upon?

(1) THE SALES PEOPLE
(2) DISTRICT OR BRANCH SALES MANAGER
(3) REGIONAL SALES MANAGER
(4) NATIONAL SALES MANAGER
(5) MARKETING VICE PRESIDENT
(6) SOMEONE ELSE _____

_____

NOTES IF APPROPRIATE _____
_____

48. How would you describe your <u>sales department's</u> past practices of trying new selling approaches? If we use a scale from 1-7, where 7 means you have a history of being a leader in adopting new sales approaches, and 1 means you're very cautious and seldom adopt new approaches, what number best describes your company?

SELDOM ADOPTS   A LEADER
1   2   3   4   5   6   7

49. Overall, if 7 is very successful, and 1 is not successful at all, how successful would you say that telemarketing or Phone Power has been in your company?

VERY UNSUCCESSFUL VERY SUCCESSFUL

1   2   3   4   5   6   7

NOTE TIME: _____

I'd like to conclude the questionnaire by asking what your present title or position is:

_____

How long have you been with company? _____

_____

This wraps up all the specific questions I wanted to ask you about telemarketing. Do you have some comments you'd like to add or any questions?

_____
_____
_____
_____

I'd like to thank you very much for your help and cooperation and before concluding would like to ask if you could recommend 1 or 2 others in your division/company knowledgable about telemarketing that I could also interview.
An implementation perspective to complement your strategic management one would be really helpful.

NUMBER ONE RECOMMENDED

NAME _____
POSITION _____
TELEPHONE _____

QUALIFY THIS PERSON BY ASKING:
Was he/she with your company when the Phone Power decision was made?

(1) NO   (2) YES- ASK: Can you recommend another?

        └──→ IF NO, ASK: Can you think of someone else who was
              with your company when the Phone Power decision
              was made that you could recommend?

              NAME _____
              POSITION _____
              TELEPHONE _____

Could you recommend another?

NAME _____
POSITION _____
TELEPHONE _____

QUALIFY THIS PERSON BY ASKING:
Was he/she with your company when the Phone Power decision
was made?
(1) NO   (2) YES

⟶ IF NO, ASK: Can you think of someone else who was
   with your company when the Phone Power decision
   was made?

   NAME _____
   POSITION _____
   TELEPHONE _____

Thank-you very much for your help in completing this study.
We really appreciate your comments. Good-bye

APPENDIX C – Guides For Potential Problems For Interviewers

GUIDES TO OBJECTIONS OR COMMENTS THAT MIGHT ARISE

1. THE INTRODUCTION TO THE INTERVIEW IS A GUIDE ONLY - BE FLEXIBLE IN TALKING TO THE CONTACT AND HANDLE QUERIES AS THEY COME UP. MOST IMPORTANTLY THE INTRODUCTION TO THE INTERVIEW SHOULD IDENTIFY SELF AND PROJECT AND GET COOPERATION OF THE CONTACT TO PARTICIPATE IN THE INTERVIEW.

2. USE DISCRETION IN HANDLING COMMENTS OR OBJECTIONS AS THEY COME UP BUT USE THE FOLLOWING GUIDES.

3. CONVENTIONS USED IN THE INTERVIEW GUIDE ARE:

(1) CAPS FOR YOUR INSTRUCTIONS - YOU DON'T SAY ANYTHING IN CAPS UNLESS PROBING.

(2) QUESTIONS TO ASK RESPONDENTS ARE IN LOWERCASE LETTERS.

POSSIBLE OBJECTIONS

1. WE DON'T USE TELEMARKETING ANYMORE. WE FOUND IT DIDN'T WORK.

Actually, we want to talk with you especially - we believe that we can learn as much from talking with you as with companies who still use it. Its important for us to know what your experiences with telemarketing were.

2. TOO BUSY.

This should only take about 20-30 minutes. Sorry to have caught you at a bad time. When would be a more convenient time forme to call back.

FILL IN THE RESPONSE SHEET ON THE INTERVIEW GUIDE WITH TIME TO CALL BACK.

3. NOT INTERESTED.

Since the research is intended to help improve the productivity of selling methods, its extremely important that we get the opinions of everyone in the sample, so I'd really like to talk with you.

OR IF RESPONDENT GIVES SPECIFIC REASON FOR NON-INTEREST - GO TO APPROPRIATE RESPONSE.

4. NO ONE ELSE'S BUSINESS.

I can certainly understand, thats why all of our interviews are confidential. Protecting a firm's privacy is one of our major concerns. All the results are released in a way that no single firm or individual can ever be identified.

5. OBJECTS TO SURVEYS.

We think that this particular survey is very important because most sales managers have been troubled by the high costs of direct sales efforts. This survey is seeking answers to questions about one way to solve those problems. It should really help businesses such as yours make more effective use of telemarketing. We would be happy to send you a summary of the results if you would like?

6. WHERE GET MY NAME.

We are contacting a sample of companies who have participated in Phone Power Programs with Bell Canada over the past few years.

7. I'VE RECENTLY PARTICIPATED IN A BELL CANADA STUDY AND AM NOT INTERESTED IN ANOTHER.

IN THIS CASE THE AGREEMENT WITH BELL IS NOT TO ATTEMPT TO OVERCOME RESISTANCE.

I can understand your feelings about too many surveys. Thanks for your help. Goodbye.

APPENDIX D – SUPPLEMENTARY CORRELATIONS

	Strategic Group Management Support of Telemarketing (Question 20)	Implementer Group Management Support of Telemarketing (Question 20)
Strategic Group Management Attitudes to Telemarketing (Questions 13,14,16)	$r = .136$ $p = .08$	$r = .146$ $p = .07$
Implementer Group Management Attitudes to Telemarketing (Questions 13,14,16)	$r = .162$ $p = .05$	$r = .287$ $p = .00$

APPENDIX E – Lisrel Estimates For The Revised Model
Using the Covariance Matrix as Input

LISREL Estimates For the Revised Model
Using the Covariance Matrix as Input

The Y Measurement Model

	LISREL Estimate	Standard Errors	T-Value
SMST	1.00	–	–
IMST	1.45**	.61	2.34
SRI	1.00	–	–
IRI	1.01**	.21	4.90
SRST	1.00	–	–
SOS	1.00	–	–
IOS	.96**	.14	6.97
SMS	.74**	.08	8.84
IMS	.73**	.10	7.10
SCT	.45**	.07	6.85
ICT	.38**	.06	5.87
SAC	.49**	.07	6.99
IAC	.48**	.07	7.28
SRN	.52**	.07	7.13
IRN	.47**	.08	6.04

The X Measurement Model

	LISREL Estimate	Standard Errors	T-Value
SCE	1.00	–	–
SFO	1.00	–	–
IFO	.77**	.17	4.66
SDIF	1.00	–	–
IDIF	.80**	.10	7.83
SDIV	1.00	–	–
IDIV	.81**	.11	7.51
IRCH	1.00	–	–
SRCH	.46**	.13	3.50
IACT	.28**	.10	2.79
SMSI	1.00	–	–
IMSI	.75**	.28	2.67
SRSI	1.00	–	–
IRSI	.49*	.22	2.27
SCOMP	1.00	–	–
ICOMP	.95*	.41	2.28

The Structural Model

	LISREL Estimate	Standard Errors	T-Value
β_{21}	1.57*	.69	2.22
β_{42}	.43**	.10	3.98
β_{43}	.05*	.03	1.65
γ_{16}	.29*	.09	1.86
γ_{23}	.10*	.05	2.14
γ_{24}	.15*	.07	1.72
γ_{37}	1.13**	.48	2.33
γ_{38}	.47**	.19	2.35
γ_{41}	.07*	.04	2.05
γ_{42}	-.12*	.06	-1.92
γ_{45}	.36**	.13	2.83

* $P < .05$ (one-tail test)

** $P < .01$

END

11·03·86

FIN