Walden University

College of Management and Human Potential

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Sean Edgeington

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Walden University
2023

Abstract

Relationship Between Investment and IT Innovation Consumer Acceptance

by

Sean Edgeington

MBA, Keller Graduate School of Management, 2007

BS, DeVry University, 2005

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Management

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Abstract

According to recent studies, ineffective innovation performance has the possibility for adverse financial performance as innovation is a significant driver of consumer acceptance and organizational performance. Researchers have demonstrated that innovation management can be successful but has not been able to determine the correlation of consumer acceptance. The purpose of this quantitative correlational study is to understand and interpret how organizations manage innovation and how it relates to their performance and consumer acceptance. The methodology encompasses innovation resistance theory and the technology acceptance model. The study includes participant selection, research instrument use, recruitment procedures, participation, data collection, and data analysis. The results suggest that organizations can increase profitability by offering innovative products and managing innovation based on consumer acceptance criteria. The findings also support the technology acceptance model, indicating that consumers are more likely to accept subscription services that are easy to use on their smartphones. The implications of this study include potential positive social change through improved organizational performance, job creation, and increased competitiveness within industries. The social impact of managing innovation in turn could promote a professional development inside an organization and their performance strategies.

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Dedication

This work is dedicated to my wife, Kelle Edgeington and our four children Boweden Edgeington, Chabah Edgeington, Joevanni Edgeington, and EddyAnna Edgeington. You have no idea how much inspiration and motivation you have given me to accomplish this goal. Finally, I dedicate this work to my grandmother, Dr. Freda W. Baldwin, when I went to your graduation as a young teenager, you made me realize how important education was.

Acknowledgments

I would like to acknowledge both my parents. I wish you could have seen me complete this achievement. I would like to thank the leadership of Walden University and I would like to especially thank Dr. Karina Kasztelnik, chair and supervisor of the research study, whose guidance and support was influential during this process. Finally, I would like to thank Dr. Steven Tippins committee member of the research study.

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Chapter 1: Introduction to the Study

True innovation is one that improves people's lives.

—Steve Wozniak

In 2020, the world was faced with a pandemic caused by COVID-19. Businesses, schools, and governments were shut down expecting to still be fully functional and profitable. While some businesses were ready to continue business as usual by using innovative solutions, some businesses were not ready and therefore went out of business, closed, or had a major impact on their financial status. Universities, high schools, elementary schools, and trade schools that only provided in-person classes had to make their move to online-only classes to help slow the spread of the COVID-19 disease and follow the Center for Disease Control and Prevention's (CDC) guidelines. Moving classes to online-only meant that teachers who only taught in-person had to adjust their curriculum and their technological needs had to be re-evaluated or innovated to provide the same curriculum and results.

Restaurants faced closures due to local government laws citing that they could not be opened to the public for inside dining. Some restaurants could provide online food ordering and delivery to their customers. The entertainment industry stopped or delayed most production projects. Organizations moved employees to a remote workforce by providing a mobile device so that their employees could continue to work from home with little to no disruptions. Some medical offices that provided primary care moved their patient consultations to video conferencing. Medical offices that could not provide video

conferencing faced challenges from their local government and were forced to close until the pandemic spread slowed down.

Chesbrough (2007) observed that there was a gap in who has the authority and the capability to innovate an organization's business model. Business model innovation is gaining more attention in research where businesses and their leaders are progressively giving more attention to gaining a competitive business advantage (Foss & Saebi, 2017). Competing through disruptions, organizations allow a buffer to support or face challenges that are created by competitors or outside events such as COVID-19 (Pan et al., 2020).

In Chapter 1, I present the background of the study, the problem statement, the purpose of this quantitative study, the research questions and hypotheses of the study, a summary of the theoretical foundation, nature of the study, definitions of the major terms used throughout this study, the assumptions made, the scope and delimitations of the study, and the limitations of this study. I also justify the significance of the study, theory, practice, and social change. I conclude Chapter 1 with a summary and transition to Chapter 2.

Background of the Study

Austrian economist Joseph Schumpeter began to study how innovations affected the capitalist system and explained that old processes were being destroyed and new processes would form (Edwards-Schachter & Wallace, 2017). In 1962, Rogers wrote about the diffusion of innovations. There were 405 publications about that topic and by 1971, the publications regarding the diffusion of innovation nearly tripled to over 1,500 (Rogers, 1995, p. xv). Since 1995, a Google Scholar search term for "innovation" finds

over 4 million publications. There are several categories of innovation that have been researched such as innovation management, innovation theories, and innovation capacity and types.

Technological entrepreneurship is accepted as a modern driver of technology and business; however, feasibility is necessary but not enough (Hall et al., 2019). The automotive manufacturer Tesla implements innovation within their organization and with previous versions of innovation failing, consumers were unhappy (Lebeau, 2019). Organizations need to understand their business in depth, while also implementing better standards to foster best business practices, and although people may be skeptical or wary of innovations, business-related concerns are crucial for the achievements of innovations (Kirkiç, 2019).

Combining the strategies for innovation with strategies of cost reduction, the relationship between information technology (IT) investments and firm performance plays a significant role while managing innovation at organizations (Mithas & Rust, 2016). The performance of an organization is a crucial measurement of the organization's outcome and while innovation may be risky, innovation generally has a positive outcome for the organization's performance (Walker et al., 2015). Organizations should find a way to adapt and manage innovation into their mission and strategies to enhance performance and successfully implement innovative technologies (Walker, et al., 2010).

Organizational climate for innovation is defined as supporting inventiveness and change is encouraged where the main aspect of managing innovation is creating the proper climate so personnel can build upon each other's thoughts and recommendations

for innovation within an organization (Shanker et al., 2017). Little research is done with the regard to organizational climate for innovation and an organization's performance, less with management innovation within an organization. In this study, I hope to address those gaps related to organizational performance versus management innovation.

Preceding research studies show progress in the problems of the different types of innovation, innovation management, and knowledge management within organizations. Parida et al. (2012) focused on the implications of open innovation (OI) practices of small and medium-sized enterprises (SMEs) and how the innovation performance was applicable. The different open innovation actions led to the discovery that depending on the type of innovation, there were different outcomes; technology scouting was linked to incremental performance while high-tech industries should consider open innovation adoption. This study was completed in 2009 and it concentrated on 252 high-tech SMEs within the country of Sweden.

Spithoven et al. (2013) investigated just how open innovation impacts the performance of SMEs in comparison to larger enterprises and found that the key performance effects of open innovation are different, and SMEs are more effective than large enterprises and that large enterprises take advantage more of their research strategies.

Current research into innovation management during the COVID-19 pandemic describes how organizations' innovation activities declined (Guderian et al., 2021). Companies that combine innovation into their overall strategy making it the

determination of success tend to be some of the Highest Ranked Innovative Companies from the time of 2018-2020 (Grădinaru et al., 2020).

Although previous and current research studies share a common theme that organizations that adopt innovation into their overall business practices tend to be more successful than organizations that do not adopt innovation, there is still a gap in research on how to manage innovation and how managing innovation affects the organization's performance.

Problem Statement

Most organizations have a goal to be innovative and do not understand how to define innovation (McGowan, 2016). Business managers pursue ways to improve profits and efficiency by integrating innovations without preparation and information, which will eventually affect productivity and revenue (Kim & Min, 2015). According to Blair (2015), innovation has the potential to improve the competitive benefits of a business. The social problem is that management innovation being implemented within an organization is limited even though it has been receiving attention over the past few years (Birkinshaw et al., 2008).

Considering new, upcoming technology is not always complemented when a new idea arrives. New technologies that are introduced carry a risk to consumer acceptance (Adner, 2006, p. 1), and customers must also adopt the ideas of innovation. Fifty-six percent of IT leaders believe that there is not a definite meaning on what innovation is but feel innovation is a necessity in businesses (McGowan, 2016). The specific management problem is the limited understanding of how innovation management relates to the

organization's performance. If C-level executives do not understand management innovation and how it affects their organization's performance, an organization may lose money in the wrong investments causing a decline in the organization's performance. Another aspect this research study can help understand is that if C-level executives understand the organization's innovative needs and wants, their employees can expand their business profits.

Purpose of the Study

The purpose of this quantitative correlational study was to understand and interpret how organizations manage innovation and if an organization is managing innovation, how does it relate to the organization's performance and consumer acceptance. I tested the theory of management innovation and how it relates to the organization's performance, the relationship of management innovation to an organization's performance, controlling consumer acceptance rate for the consumer participants through a survey. The independent variable, innovation management, is defined as the implementation of a practice, process, structure, or techniques that is new and intended to further an organization's goals (Birkinshaw et al., 2008). The dependent variable, organization's performance, will be defined as the ability to achieve goals and objectives at an organization (Abu-Jarad et al., 2010), and the control and intervening variables, consumer user acceptance of innovation, which are defined as how well a consumer adapts to new technology on their own consent without being forced (Khan, Sadaf, & Ahmed, 2019).

Research Questions and Hypotheses

The geographical area for this research is the United States. The two variables I examined were what investments are considered at an organization that are IT innovation and the consumer user acceptance of innovative technologies. Consumer user acceptance was the dependent variable and the IT innovation category was the predictor variable. In using the perceived usefulness and perceived ease of use, I was able to measure the results of this study using the technology acceptance model.

RQ1: What is the relationship between management innovation and an organization's performance?

$H_0$1: There is no relationship between management innovation and an organization's performance.

H_a1: There is a relationship between management innovation and an organization's performance.

RQ2: What is the relationship between innovation management and consumer acceptance?

$H_0$2: There is no relationship between innovation management and consumer acceptance.

H_a2: There is a relationship between innovation management and consumer acceptance.

Theoretical Foundation

The framework for this study is based upon from the following theories: (a) innovation diffusion theory, (b) unified theory of acceptance and use of technology

(UTAUT), (c) theory of economic development, (d) technology acceptance model, and

(e) innovation resistance theory. The five theories include concepts that are related to the

research study because the theories relate to innovation and acceptance through

consumers. The concepts found within each of the theories are relevant to measuring

innovation and consumer acceptance within their respective areas.

Innovation Diffusion Theory

The innovation diffusion theory, also known as diffusion innovation theory is

often compared to technology acceptance model. However, the innovation diffusion

theory is more specific about *why* consumers adopt innovations or *how* they decide to

adopt an innovation (Rogers, 1995). Rogers (2003) stated that adoption is when the full

use of an innovation action is best when available (p. 177). *Diffusion* is defined as the

process of how an innovation is communicated between two or more parties (Rogers,

1995, p.6). The innovation diffusion theory has five characteristics that are qualifications

to any adoption of innovation: (a) advantages, (b) complexity, (c) compatibility, (d)

observability, and (e) trialability (Rogers, 1995). Also, there are five steps that are

involved in the diffusion of innovation. Awareness, interest, evaluation, trial, and

adoption (Halton, 2021), which Rogers (1995) renamed as knowledge, persuasion,

decision, implementation, and confirmation. People are categorized in the diffusion of

innovation theory as innovators, early adopters, early majority, late majority, and

laggards (Halton, 2021).

UTAUT

The concept of the UTAUT revolves around how a consumer easily adjusts to accepting new technology of a new product or service. Management innovation is the invention and implementation of managing a new practice, process, structure, or technique that is intended to further organizational goals (Birkinshaw et al., 2008). The UTAUT is a tool where the probability of success for a new technology is introduced and helps identify either the acceptance or unacceptance of the technology (Venkatesh et al., 2003).

Theory of Economic Development

The theory of economic development was developed by Schumpeter (1934), who described innovation as a way to change the existing economical system and make profits while reducing costs. When innovation is deemed a success, growth is usually accompanied to the economy and innovation is considered a process of economic development (Lee, 2020).

Technology Acceptance Model

The technology acceptance model was introduced in 1986 and was once considered an influential and common theory to describe someone's acceptance of a specific technology (Davis, 1986). The technology acceptance model theory is dependent upon two variables: perceived usefulness and perceived ease of use (Lee et al., 2003). This theory helps to identify the gaps of the previous research as to the "why" someone will accept and decline innovation.

Innovation Resistance Theory

Innovation resistance theory gives an understanding of why consumers resist change towards any new innovations. Ram (1987) proposed this theory, which was later modified by Ram and Sheth (1987) to state that the use of innovation will encourage consumers to resist by their behaviors.

The theories that addressed and helped to formulate the research questions for this study are all related to how a consumer either accepts or rejects innovation products or services. The concepts within these theories support the current study to understand how consumers accept or reject innovation and how leadership at organizations can manage the innovation internally with their employees and possibly increase consumer acceptability prior to launching a new product or service.

Nature of the Study

The nature of this study was a quantitative correlational design. Quantitative research is a method used to measure two random variables that may help explain the phenomenon. By using the quantitative correlational design, my hypothesis was that organizations need to define the innovation accepted by consumers such that that they do not become victims of such organizations such as Blockbuster and Sears (O'Reilly & Binns, 2019). By researching and defining what innovation is and how to invest in innovative technologies, this study may help to reduce a gap for organizations and possibly assist in their market research of what consumers will easily accept or reject as an innovative product or service.

A qualitative approach to this research would not have been appropriate because a qualitative study is where a researcher attempts to interpret information that is gathered to generate a theory and does not gather information in a numerical manner (Bell, Bryman & Harley, 2018). Because a mixed-method approach combines both quantitative and qualitative, the mixed-method approach was not used. For this study's design, in order to test the relationships between the variables, a correlation design was best.

Definitions

The definitions in this section are for terminology that was used to gather a better understanding of the different types of innovation and organizational performance.

Innovation management: The International Standard for Innovation Management was published in 2019 and is defined in ISO56002 as

> Innovation management can include establishing an innovation vision, innovation policy and innovation objectives, and innovation strategies, innovation processes, structures, roles and responsibilities and innovation support, to achieve those objectives through innovation planning, innovation operations, performance evaluation, improvement and other activities. (www.iso.org, 2021)

Organization performance: Organization performance is the ability to accomplish the financial goals and objectives that an organization sets either quarterly, annually, or in their mission statement. An organization's performance is usually measured by the success of profits and the return on assets, equity, sales, and investments (Rahman et al., 2018). Organization performance is defined as meeting or exceeding the financial performance goals for either the business quarter or annually.

Consumer acceptance: Consumer acceptance is the acceptance or extent of which a consumer will use a certain type of innovative product or service.

Innovation premium: Defined by Dyer et al. (2011), the innovation premium is the company's market value that cannot be accounted for from cash flows in its products or businesses (p. 10).

Small and medium-sized enterprises (SMEs): An organization with less than 250 employees (Parida et al., 2012).

Closed innovation: In the seminal works of Chesbrough (2003), closed innovation is defined as beneficial concepts or ideas that come from an organization internally and goes to market from inside the organization. It is not open to outside of the organization at all.

Open innovation (OI): Also, in the seminal works of Henry Chesbrough (2003), open innovation is defined as valuable ideas that come from either inside or outside of an organization and can go to market from either inside or outside of the organization (p.43).

Knowledge management: In the seminal article, Quintas et al. (1997) describes knowledge management that "comprises information, communication, human resources, intellectual capital, brands, etc. It does not mean managing all that is known (p.385)." For the purpose of this research study, knowledge management will be defined as a system designed to capture interactions of staff to improve the overall organizational performance, "there is a distinction between information and knowledge (Nonaka, p.15, 1994)."

Innovators: Innovators are those who are open-minded to trying new products or services immediately when a product or service is first introduced (Halton, 2021). Garud and Prabhu (2020) described characteristics of innovators as how well people can acquire the knowledge necessary to discover new products or services.

Early adopters: Consumers who are interested in trying new products or services and adopting new products or services early when the innovation has been introduced (Halton, 2021).

Early majority: Consumers that are part of the general population and "pave the way" for the use of a new product or service within the mainstream of society (Halton, 2021).

Late majority: Consumers who are just after the early majority into adopting a new product or service as a part of their daily life and part of the general population (Halton, 2021).

Laggards: Consumers that lag behind the late majority population into adopting a new product or service. Laggards are typically known to be wary of taking new risks in new products or services and when the general population has accepted a new product or service, laggards are generally forced into using that new product or service.

Assumptions

Assumptions are ideas or thoughts that a researcher will make that are relative to the study to make certain that the study is completely within an adequate budget and that the research question is satisfactorily answered (Marshall & Rossman, 2016). The first assumption I made was that all participants answering surveys would answer truthfully

and honestly to ensure that the research results are credible. There was not a secluded way I could determine to question the survey results based on the participants' survey results. The second assumption was that when the survey link was emailed, selected participants would not share the link so that unintended recipients would not respond to the survey. I did my due diligence to ensure that each participant would understand that the participant shall not forward the link nor have another participant complete the survey in their place. The third assumption was that the participants would be familiar with innovation and its capacities within their business industry. Before the actual survey began, I asked preliminary questions of each participant to ensure they qualify for the survey and that they are the right person or people to complete the survey.

Scope and Delimitations

Delimitations are components that define the scope for a study (Yin, 2018). One delimitation of this study is the location. This research study focused on the results of participants within the United States of America. While the United States is a large country, not all geographic areas of the United States had participation. This study was not focused on areas outside of the United States. United States territories were not considered for this research either.

Convenience sampling was used for this study as it is suggested for a quantitative study in this nature (Etikan et al., 2016). Convenience sampling is a type of nonrandom sampling that is by researchers where participants of a target population that meet specific criteria are used for a research study. Convenience sampling is referred to the

"researching subjects of the population that are easily accessible to the researcher (Etikan et al., 2016, p.10)."

The focus of this study was to identify the relationship between innovation management and organizational performance. The population surveyed in this study were individuals who work full-time (36+ hours per week) who are in organizations where innovation is or is not managed and determine how well their organization performs where innovation is either accepted or unaccepted among its leaders. The population of this study did not include participants who work part-time (less than 35 hours per week). The results of this study are transferrable to organizations that are outside of the United States in different industries and can be applied to either small, medium, or enterprise sized organizations.

Limitations

There are limitations in this study that is related to the design. One limitation for this study stems from the geographic area that I focused on. Having the primary focus on United States and not worldwide may result in different results from other geographical locations such as third-world countries or other countries using innovative technology not available to the United States. Another limitation to this study is the participation rate. To obtain a significant correlation study, I needed to obtain completed surveys from at least 40 participants from various organizations that either do or do not provide management innovation.

Research results are limited due to the sample size that is used for this study. Legris et al. (2003) stated that there are three limitations of using the technology

acceptance model where surveys include students, types of applications, and self-reported use. The expected limitation in this case is the participant's self-reporting results. The technology acceptance model establishes the user attitude and recognizes the role of perceived ease of use and perceived usefulness in why users accept innovative systems (Min et al., 2019).

The potential for biases that could influence this study includes that I hold a position as a senior leader in technology where I also manage innovation within the IT department. Therefore, when finding participants for my study, I may inadvertently not have given my survey link to a participant who would meet the criteria to have their results recorded. Reasonable measures were taken to address these limitations and ensure that the results would be transparent when finding participants for my research study.

Significance of the Study

The findings of this research may reduce a gap by providing an understanding of how organizations can better manage innovation and forecast organizational performance to increase product or service delivery sales using newer innovative technologies. Corporate executive teams do not allocate a significant budget for resources that are towards a strategic corporate innovation system (Prahalad & Hamel, 1990); approximately 6% of corporate management teams are satisfied with their innovation performance (Hamel & Tennant, 2015). Organizations may be able to better understand how and what to focus on for their consumers by understanding what is accepted versus not acceptable by consumers. Organizations may also be able to better understand how and what to focus on for their employees by understanding what type of innovation is

accepted versus not accepted by employees to make their organization a better place to work.

The results of this study may help organizations manage innovation in providing better organization performance while determining what resources should be invested in and which technologies should be aged out. The research study may also help organizations be more profitable and successful in sustaining the innovative technologies that are deployed to consumers and their employees.

Significance to Theory

Findings of this study contribute to the technological advances of how to manage innovation and the ability to increase the organization's performance. Showing the relationship between the variables of innovation management and organization performance can help organizations become innovative and possibly increase their quarterly profits and organizational performance year over year. This information may be of interest to C-level executives to find what would be the best practices in innovation management to help their organization find best practices. Other findings may suggest that organizations find alternative innovations such as green technology or green innovation to create an efficient value chain and the increased productivity while being environmentally friendly (Chan, Darko, & Ameyaw, 2017).

Significance to Practice

The data collected from this research study may assist in finding effective practices for organizations in integrating innovations, managing innovations, prevent business failure, and improve productivity and profitability. Other significance could

result in which IT products or services consumers are more likely to accept or reject and how often a product or service should be updated from the previous versions. The ease of use on a product or service would be able to determine these variables within the research.

Significance to Social Change

The implication for positive social change is to show the potential of management innovation, which in turn could promote professional development inside an organization and their performance strategies. Results from this study may show the importance of investing in technological advances or innovative initiatives that will support long-term sustainability to an organization. Internal to an organization, leaders can justify the reason to manage innovation and expose innovative practices that may improve their performance. The results of this study may also show that an organizational leader or leaders can also lead their organization to improve innovation to where the results of the study may see that management innovation can be resourceful in their organizational performance. The implications for positive social change may also show how business owners can improve their organizational performance to create job opportunities, resulting in a more competitive environment within their selected industry.

Summary and Transition

In Chapter 1 of this quantitative research study, the objective was to introduce the reader to my research study and to provide a preview of the academic and professional literature. In Chapter 1, the purpose was to also provide the significance of this study of its theory, practice, and the significance and implications for social change which are to

help improve innovation management to business owners or C-Level leaders on how they can improve their organizational performance resulting in a competitive environment within their selected industry.

In Chapter 2, I provide a review of the literature search strategy of innovation management and firm performance while also providing key terms that are used to research the literature. In Chapter 2, I provide the theoretical foundations that are used in depth, the conceptual framework utilized, and a thorough review of the literature regarding innovation and organizational performance. Further, I discuss the gap in the literature regarding the need of understanding how innovation management is related to organizational performance.

Chapter 2: Literature Review

Organizations typically have a goal to be innovative, but do not understand how to define innovation (McGowan, 2016). The social problem is that management innovation being implemented within an organization is limited even though it has received attention over the past few years (Birkinshaw et al., 2008). If C-level executives do not understand management innovation and how it affects their organization's performance, an organization may lose money in the wrong investments, causing its performance to decline.

The research problem for this quantitative study is to address how firms manage innovation and identify which innovation products or services are invested into their organization. The purpose of this quantitative correlational study is to test the theory of management innovation and how it relates to an organization's performance. While the literature review provides an analysis of the importance and relevance of the independent and dependent variables, the results are not exhaustive. Where applicable, I compare the numerous points of how management innovation correlates to an organization's performance to support the relevance of this study.

In this chapter, I discuss the literature search strategy that assisted in identifying the resources that were used to create the literature review. The second section will address the theoretical foundations that I used to assemble the conceptual framework of this quantitative study: innovation diffusion theory, UTAUT, and theory of economic development. The third section discusses the literature showing the historical trend of innovation such as the different types of innovation, innovation management within

organizations, innovation in organizations and how several types of innovation are used. In the fourth section, I discuss the literature on how investment in innovation pertains to the organizational performance. The fifth section pertains to the gaps in the literature and how this quantitative study addresses the gaps.

Literature Search Strategy

For this literature review, I searched multiple databases in the Walden University Library for specific key terms to obtain primarily peer-reviewed articles that I examined and reviewed. Resources included Google Scholar, Business Source Complete, IEEE Xplore Digital Library, Emerald Insight, EBSCO, IBM Technical Paper Search, technological innovation studies, ProQuest Central, and Sage Management and Business Studies.

Contained in the literature review is an analysis and synthesis of the literature in the context of the framework discussed in this study, and on the variables in this study. I performed a literature review of several articles that are relevant to the topic of this research study that excludes regulations and data. Of the articles in the literature review, 38 were published within the last 5 years. Other reviewed articles support the literature review and were used to help base the research questions and literature review sections of this research study.

The major portion of researching the literature was to find up-to-date articles that provided key successes or failures regarding innovation and firm performance. Articles within the past 5 years were preferred, and seminal articles on innovation and firm performance were reviewed. Keywords and phrases, such as *manage, manage innovation,*

firm performance, organization performance, innovation gap, innovation management, innovation adoption, investment types containing innovation, innovation, innovative companies, process of adopting innovation, organizational performance and innovation adoption, organizational investment decisions, approaches to IT investment, information technology (IT), *innovators,* and *IT investment*, were just some of those searched and used as a solid foundation of the literature review section of this study. In some instances, I had to adjust the search terms to reduce the number of articles returned and found more specific terms to help me limit the results returned.

Additionally, I searched different innovation and economic theories: innovation diffusion theory, unified theory of acceptance and use of technology, theory of innovation and theory of economic development. I searched for various terms regarding these theories, including: *use of technology, innovation theories, economic development of innovation traits, innovation strategies, and innovation theories and models, innovation theories and concepts, and innovation frameworks.* To expand my search results, I utilized the asterisk (*) to find everything on search words that started with innovation theories. Numerous sources were reviewed dating from 1971 to the present and most sources were published within the past 5 years.

Gap in the Literature

To find the effects of resistance, Ishak and Newton (2016) completed a study within the Australian regions that utilized the theory of innovation and technology acceptance model to understand the positive resistance of technology innovations. In their mixed-method study, the researchers found four areas of resistance of innovation instead

of adoption of innovation: leaders, compatibility, complexity, and trialing. Ishak and Newton also found that two areas in overcoming resistance to technology innovations were training and support. Face-to-face training was found to be the main driver of training and support. Ishak and Newton (2016) filled the gap by extending the integrated resistance factor model, which allowed them to combine some theories such as the innovation diffusion theory and the technology acceptance model but to focus more on the adoption and implementation of acceptance of changed behaviors (p. 90).

Mobile payment solutions (MPSs) such as Apple Pay, Google Pay, and PayPal have grown steadily. Smart phones have the ability of a MPSs, yet they are still challenged and avoided by consumers with their adoption and usage (Kaur et al., 2020). Kaur et al. (2020) addressed a gap by examining why consumers in India have slowly adopted MPSs, and identified which barriers are impacting their growth. In the data collected, the authors utilized the UTAUT, UTAUT2, and innovation resistance theory to formulate their research study to investigate barriers and resistance towards the user acceptance innovations of MPSs within India. Prior to their research, other studies only identified that within India, MPSs were only new, and the awareness was particularly low amongst consumers (Sivathanu, 2019). With both of these studies, the authors found that the resistance to the technology innovation were due to user acceptance and the habits of using cash payments instead of adoption of MPSs (Kaur et al., 2020; Sivathanu, 2019).

Within agricultural innovations, a major shift in the legalization of marijuana has caused a disruption of innovative ways to cultivate, extract, testing, and overall improve the efficiencies of the marijuana plant by extracting the tetrahydrocannabinol (THC) and

cannabidiol (CBD), the main chemicals used for patients and consumer use. For example, some cannabis companies have found innovative ways and taken their productions to consumer consumption (Wyse & Luria, 2021).

Theoretical Foundation

In this section, I discuss the theories that my research study is based upon. I searched several different theories regarding technology, user type, location, behaviors, and adoption time. The theory of planned behavior and task technology fit were considered but were not chosen based on this research study. The theories reviewed exhaustively are the theory of economic development, innovation diffusion theory, and the UTAUT and UTAUT2, which were used to form this study's research questions. Morris's (2013) theory of innovation on a continuum from continuous incremental, business model innovation warfare, and discontinuous disruptive innovation. Schumpeter's theory of economic development defined innovation as a change in the current production system and is introduced to make profits and reduce costs (Schumpeter, 2003). The technology acceptance model and innovation resistance theory are also discussed in depth in this section.

Innovation Diffusion Theory

Innovation diffusion theory also known as the diffusion of innovation was introduced in 1962 and was later rectified by Rogers (1995). Rogers defined diffusion of innovation as "an idea, practice, or object that is perceived as new by an individual or other unit of adoption (Wani & Ali, 2015)." Diffusion is also the method of an innovated idea that is conveyed through certain channels over time (Rogers, 1995). In a seminal

book, Rogers (1995) discussed four main elements of diffusion of innovation as: (a) the

innovation, (b) communication channels, (c) time, and (d) the social system.

The innovation itself such as technological innovation, the information and

uncertainty of the innovative hardware or software aspect have characteristics of either an

advantage, compatibility, complexity, trialability, observability, and/or a re-invention

which can be adopted or not (Rogers, 1995, pp. 14–16). Communication channels are the

different ways to communicate specific innovations. Rogers (1995) described *mass media*

channels as the quickest ways to get the word out (newspapers, television, radio, etc.) and

interpersonal channels such as face-to-face communications (p. 18).

The third and fourth elements of diffusion is time and the social system. Time

within the diffusion process is the amount of time in which the innovation is accepted or

rejected. If the innovation is accepted or adopted, there is a rate of adoption into the

social system which is measured by both the number of members that accept the

innovation and how long the adoption takes (Rogers, 1995, p. 20).

UTAUT and UTAUT2

UTAUT is a framework that was developed by Venkatesh et al. (2003) to predict

the acceptance of technology within organizational settings (p. 426). UTAUT is classified

into four different types that influence human behaviors with the intentions of using

technology: (a) new exogenous, (b) new endogenous, (c) new moderating, and (d) new

outcome mechanisms (Venkatesh et al., 2016). An extension of UTAUT is known as

UTAUT2 which is still in its infancy (Tamilmani et al., 2021). The main difference

between UTAUT and UTAUT2 is that UTAUT2 utilizes three different constructs: (a)

hedonic motivation, (b) price value, and (c) habit (Chang, 2012). The research conducted between UTAUT and UTAUT2 shows that the better outcomes of "behavioral intentions from (56 percent to 74 percent) and technology usage (40 percent to 52 percent)" (Chang, 2012, p.107); therefore, UTAUT2 is one of the theoretical foundations that was used for this quantitative research study.

The satisfaction of using a specific type of technology, known as the hedonic motivation, is important in a consumer accepting technology (Brown & Venkatesh, 2005). The price value of the usage of technology also impacts how the consumer adapts; for example, if the price is too high, the consumer does not adapt (Chang, 2012). The remaining construct of UTAUT2 is the consumer's habit in how they change the behaviors of accepting a new technology. Kruglanski and Szumowska (2020) defined habitual behaviors as goal-driven and learned over a period of time.

Theory of Economic Development

Throughout the existence of humans, needs have changed, and we have evolved. As our needs have changed our development of the economy has also evolved. The theory of economic development was introduced by Schumpeter, who found that economic development is based off the business cycle (Pelsa & Belini, 2022).

The theory of economic development has four major elements. The first element, circular flow, is the basics of supply and demand (Emami-Langroodi, 2017). The second is the role of the entrepreneur, where the entrepreneur will take a risk or provide leadership in introducing the innovation (Emami-Langroodi, 2017). The third element is the business cycle, where the business cycle assesses itself to capitalism which is the

"process by which economic life adapts itself to the new economic conditions" (Schumpeter, 1961). The fourth and final element of the theory of economic development is the end of capitalism (Emami-Langroodi, 2017).

Technology Acceptance Model

The technology acceptance model was introduced in 1986 and was once considered an influential and common theory to describe someone's acceptance of a specific technology (Davis, 1986). The technology acceptance model is dependent upon two variables: perceived usefulness and perceived ease of use (Lee et al., 2003). This theory helps to identify the gaps of the previous research as to the "why" someone will accept or decline innovation.

Innovation Resistance Theory

Innovation resistance theory was discussed first in the seminal works by Ram (1987) but later modified by Ram and Sheth (1989) to describe why consumers resist new innovations. In the seminal works of Ram and Sheth (1989), they stated that a consumer will resist innovations if the innovation either changes their lifestyle and status. A simple version of innovation resistance theory, known as *active innovation resistance*, can be defined as a pessimistic view that does not meet users' tolerance and gives a negative attitude towards the innovation (Sadiq et al., 2021) and is a main driver for innovation rejection (Joachim et al., 2017).

Innovation resistance theory and active innovation resistance used in the theoretical foundation as reasonings for consumers and employees to reject innovations that could improve the overall easiness of a job function or quality of life. Both

innovation resistance theory and active innovation resistance have three similar foundations of innovation rejection which include postponement, opposition, or outright rejection (Szmigin & Foxall, 1998).

<div align="center">**Innovation**</div>

Innovation Defined

The term *innovation* is examined in several sources, either scientific or technical, and is highly discussed in management and economics (Godin, 2008). Before the term was widely used, the terms *invention* and *creation* were preferred to describe new products and/or services (Godin, 2008), and have become a solution or even the concept of innovation for socioeconomic issues in the world (Godin, 2020). The difference between *invention* and *innovation* is that an invention is a new idea or concept, while innovation is making the new concept into a success or extensive use (Simsit et al., 2014).

When an organization fails to innovate, they do not survive (Chesbrough, 2003). Innovation is defined in several ways. For this research study, innovation is described as making products and services better than what is often referred to as continuous or incremental innovation (Morris, 2013). Innovation is a concept introduced by Joseph Schumpeter in 1911, where he stated that innovation is when an organization launches a new product or upgrade of a new product, a new method of production or sales, the opening of a new market, a new industry structure that either creates or destructs a monopoly, or the acquisition of a new source of raw or intermediate goods (as quoted in Landini, 2020). In the Oslo Manual (OECD/Eurostat, 2018), which provides guidelines

for collecting and interpreting innovation data, it is stated that "An innovation is a new or improved product or process (or combination thereof) that differs significantly from the unit's previous products or processes and that has been made available to potential users (product) or brought into use by the unit (process)" (p. 20).

History of Innovation

Although innovation has always existed, it was not always called "innovation." It was not until the 1930s, when the Austrian economist Joseph Schumpeter started to study how innovations affected the capitalist system. He explained that, whether the opening of new markets was foreign or domestic, the old process was being destroyed and a new process, which he named *creative destruction*, would form (Edwards-Schachter & Wallace, 2017). Growth and development are driven by the changes in technology but have also been the causes of the expansion of cities, regions, and the global economy (Godin, 2017, p. 1).

Innovation in the 21st century is growing rapidly. Companies are advancing to higher levels and the leaders in different industries making a profit are the ones who can step out of the box, evolve, and allow their innovation to be competitive. Organizations that lack change or innovation will not survive (Galetic & Vukelic, 2017).

Adoption of innovation models from the consumer side is discussed in Rogers's model known as the basic innovation adoption and diffusion model (Rogers, 1983). In this model, there are three steps: (a) the invention of the idea, (b) the development of production and testing, and (c) the diffusion to and adoption by users (Rogers & Schoemaker, 1971).

Innovation in Organizations

IBM, HP, Xerox Corporation, and Bell Labs are just a few organizations that took innovation to a new level at their peak. Xerox Corporation led the industry in copying machines (Chesbrough, 2006). Xerox also created the Palo Alto Research Center (PARC) where it developed innovations, developed them into products, and sought to distribute these products with the intention of making a profit (Chesbrough, 2003, p. 4). A couple of the innovative ideas that came from Xerox's PARC are 3COM and Adobe, which are still running at the time of this research study, publicly.

3Com was founded by Robert Metcalfe and David Boggs in 1979, and its products were an idea that was developed at the PARC. 3Com created products such as the network interface card (NIC), dial-up modems, and protocols that helped shape the history and early beginnings of the Internet and network devices. First, these ideas were completed at the PARC where Xerox held onto the idea but did nothing about it. This caused Robert Metcalfe to leave Xerox and incorporate 3Com, which acquired USRobotics in 1997. 3Com and USRobotics had combined revenue of $5B (CNET, 1997). 3Com was acquired by Hewlett-Packard in 2009 for $2.7B (Hewlett Packard, 2009).

Adobe Inc., another product from Xerox's PARC, was founded in 1982 by John Warnock and Charles Geschke (Warnock & Geschke, 2019), who developed a programming language that was specifically for the use of printers to provide digital fonts and could be printed on practically any device (Warnock, 2018). Adobe officially went public on August 20, 1986 (Adobe.com, 2020) and has developed applications such as

Adobe Acrobat Reader, which contains the international standard of a portable document format (PDF) ISO 32000-1:2008 (Acosta-Vargas et al., 2020).

Netflix is another example of innovating how consumers "rent" a movie for their Friday nights. When Blockbuster and Hollywood Video had a great deal of market share on renting VHS videos, Netflix established a service to rent DVDs by mail in 1997 (Netflix.com, 2023). By offering a subscription to consumers for allowing an unlimited DVD rental without due dates or late fees, this allowed Netflix to grow their membership to over 5M by 2006, less than ten years of the idea (Netflix.com, 2023).

Innovation Capacity and Types

There are several types of models of innovation. For this quantitative research study, I will define the following models of innovation: open innovation (OI), closed innovation (CI), disruptive innovation (DI), and free innovation (FI). The main differences in these models of innovation are where the innovation or inventions have been created and how they are accessible to communities and organizations, either inside or outside of their organization. OI is defined as a phenomenon where organizations utilize the knowledge of internal and external innovation from other organizations (Chesbrough, 2005, p. 1). OI has spread beyond firm-to-firm collaborations particularly in supply chains and ecosystems, and is becoming more difficult to detect (Chesbrough, 2019). An example of OI is Mozilla. Mozilla is an open-source software application that allows developers world-wide to advance their products, or simply-report bugs within their software and offer a fix of the application.

CI is where an internal innovation is created, but not made available to the public, and where the organization is focused internally and typically will hire the smartest people in the industry to come up with ideas or inventions, but not share the knowledge outside of the organization (Alawamleh et al., 2018). An example of CI would be where Apple is developing its latest and greatest iPhone, and during this production there are a few individuals that know about the technology but will not leak any of the information to the public.

DI is a model that is rarely discussed by researchers in technology or in the business sector, and "dramatically disrupts the current market" (Schmidt & Druehl, 2008, p.347). Schmidt and Druehl (2008) described DI as a new product that invades the existing market on the low end and diffuses upward. DI is often confused by any new threats or changes in any industry (Christensen, McDonald, Altman, & Palmer, 2018).

FI is the developed innovations that were given away by consumers as a free good or service resulting in advancements in social welfare (Von Hippel, 2016, p. 1). An example of FI is Amazon's usage of cameras to detect whether its warehouse workers were following social distancing rules during the COVID-19 pandemic. Amazon engineers were able to provide real-time feedback to their employees when they were working in their warehouses; they referred to these systems as *distance assistants*. Amazon later published the source code and instructions on how to build this concept for the public for free, which makes it FI. Von Hippel (2016) described different types of innovation regarding FI research studies. In his book, he noted that there were several categories being studied, which included craft and shop tools, sports and hobbies, and

categories related to dwellings, gardening, children, vehicles, pets, medical, and computer software (Von Hippel, 2016).

Innovation Management

Innovation management has recently been a trend in how to manage what organizations should be investing in. Like all other types of management, such as people, resources, and money, innovation management is becoming popular in organizations. Like knowledge management, innovation management is defined as the discipline of process management in innovation to develop a product, process and/or organizational innovation (Simsit et al., 2014). The innovation management framework, absolute innovation management (AIM), is to help provide a deeper understanding of innovation and how to make it more implementable (Aslam et al., 2020). Nambison et al. (2017) explained that as technologies change, which essentially changes organizations, innovation management should be researched to incorporate concepts that reflect and capture the ways in which technologies are changing (Nambison et al.).

With technology emerging, a new concept called digital innovation is on the rise. Nambisan et al. (2017) described that digital innovation as the usage of digital technology during the process of innovation. Take the digital innovation definition to a new level and describe digital innovation as a process that involves all work associated with the creation and development of a new digital product but does not limit these innovations to sales and distribution (Khotamov & Avazoz, 2020).

Adoption of Innovation

Not all organizations will decide to innovate. Those that do not innovate can survive within their business. The question of determining how long an organization can survive without innovation is not part of this quantitative study. Yun (2020) stated that organizational performance has two parts: (a) Organizational performance has an impact on innovation adoption early on which can be negative for organizations with low performance and positive for organizations that have high performance. And (b) "adoption of an innovation is positively influenced by direct experience (p.808)."

For an organization to adopt innovation, the organization must adopt the innovation successfully to accomplish or succeed in organizational performance (Boyne & Gould-Williams, 2005). Michael Aiken and Jerald Hage (1970) created the process of innovation adoption and divided the process into four different stages: evaluation, initiation, implementation, and routinization (Hage & Aiken, 1971).

Investment

There are several types of investments that organizations have such as real estate, employee, long-term, short-term, etc. For this research study, I will concentrate on IT investments of organizations such as process improvements, experiments, transformations, and renewals involving innovation. IT investment categories such as an enterprise resource planning (ERP) tools, hardware, software, and network infrastructure are just a few categories that will be discussed. Strategic objectives and the technology scope are two dimensions that were reviewed for IT investments. Ross and Beath (2002)

interviewed 18 different companies and found the following framework for IT investment

to be useful. The framework is highlighted in Figure 1.

Figure 1

A Framework for IT Investment
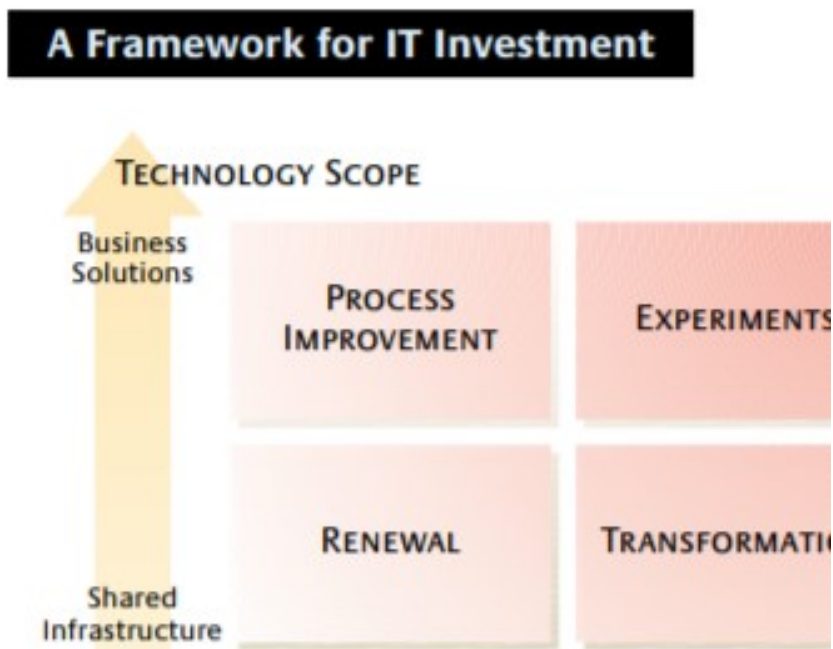
Note. From "Beyond the Business Case: New Approaches to IT Investment," by J. W.

Ross & C. M. Beath, *MIT Sloan Management Review*, 2002

(https://sloanreview.mit.edu/article/beyond-the-business-case-new-approaches-to-it-

investment/).

Process improvements is an efficient way to identify, analyze, and improve an

existing process by an organization to enhance performance or improve the quality of the

user experience for either a customer or end-user. An experiment may result in a process

improvement by simply trying a new way of performing a process to improve an

efficiency. An experiment does not always result in a process improvement and should be determined on efficiency and final cost or savings of the experiment in its result.

A transformation investment is usually necessary when an organization's infrastructure reduces its capacity to improve products to a long-standing success (Ross & Beath, 2002). A renewal is where something has become outdated, but still has its value and is renewed. An example would be Microsoft Office 2007 being renewed to Microsoft Office 2010 and then to Microsoft Office 2013.

Organizational Performance

Most organizations have objectives that are measurable and tend to be profitable. In a recent study, researchers represent organizational performance in multiple dimensions where the concepts of efficiency, effectiveness, and financial performance are impacted by the management and organization itself (George et al., 2019). Without the measurement of organizational performance, organizations have no real purpose to survive without the established goals and/or objectives (Khalid et al., 2019). Ahmed (2018) defined organizational performance as an organization's output within the external and internal environment.

Organization performance is typically defined as the ability to achieve the goals and objectives that an organization sets either quarterly, annually, or in their mission statement. An organization's performance is usually measured by the success of profits and the return on assets, equity, sales, and investments (Rahman et al., 2018). Performance of an organization is a key performance measurement of its outcome and,

while innovation may be risky, innovation generally has a positive outcome for an organization's performance (Walker et al., 2015).

Innovators Method

Furr and Dyer (2014) researched both quantitively and qualitatively organizations that were either successful or unsuccessful in implementing innovation. The companies that were researched fell into four different categories (1) companies that maintained innovation capabilities after founding, (2) companies that had lost their innovation capabilities and then reignited them, (3) successful and failed innovation initiatives in new ventures, and (4) successful and failed innovation initiatives in established companies (Furr and Dyer, 2014, p.20).

The method Furr and Dyer (2014) found that was successful in adapting innovation within an organization were to follow the steps of: *(1) insight, (2) problem, (3) solution, (4) business model,* and *(5) scale it* (p. 19). Furr and Dyer (2014) also found that publicly traded companies that adopted innovation elements, between three to five years of adoption, their innovation premium scores rose over 57% (p.21).

Consumer Acceptance

In several of the theories mentioned in the theoretical foundation section of this paper, the innovation diffusion theory was highly discussed and mentioned innovators to laggards. The technology acceptance model coincides with the perceived ease of use where a person's perception of using technology is beneficial and accepted. Research shows that a consumer accepts innovation that is a service when the service is easy to use (An et al., 2023).

Perceived usefulness is another factor that influences consumers to adopt innovative technologies (Alsyouf et al., 2023). When a product or service is not easily adoptable to a consumer, consumers can reject the product or service until it becomes simple to use.

Innovators

As previously stated, innovators are people that are open-minded and will freely try new products or services immediately (Halton, 2021). Research shows that an innovator's characteristics have different social behaviors and communication styles than those that are non-innovators (Colladon et al., 2023). Innovators also tend to use complex language and use positive, factual-based language, and innovators are those with a higher level of education, self-confidence, and tolerance for vagueness (Maddi, 1996).

Laggards

Laggards are those on the opposite side of an innovator. They are skeptical and conservative towards any new innovations (Ruokamo et al., 2023). And, as previously defined, a laggard is typically forced into using a new product or service. Muduganti et al. (2005) researched the characteristics of laggards, late majority, early, majority, early adopters, and innovators within a bell curve and defined laggards of an attitude range of 1-3. In their research, they simulated that laggards' adoption rate of IT innovations will adopt IT innovations when there are low values of intentions of adopting technology. Laggards may be sometimes known as the older population due to the newness of several types of technological advancements in the past 20 years.

Summary and Conclusions

In Chapter 2, I reviewed the literature of several studies and theories that will be used in this quantitative correlational study. The themes found in the literature suggest that there is a correlation of innovation management and an organizations firms' performance. The different theories discussed such as the technology acceptance model and innovation resistance theory give reasons as to why innovation is accepted or not. While my full-time job being a Director of IT in the cannabis industry, a new industry that uses technological improvements and innovative ways to get the product from seed to sale, particularly artificial intelligence (AI), I feel that my experience in adopting innovative technology or procedures qualify me to understand strategies of other organizations that might engage consumers and organizational employees in finding more information on these topics of consumer acceptance and innovation management as it relates to organizational performance.

The major gap in the literature review is that not all organizations have innovation management departments or teams, yet some organizations are able to excel and understand the consumers' innovation acceptance without innovation management. While some organizations have innovation or knowledge management, this research study will be able to understand on the "why" some organizations are able to be more successful than others that have knowledge or innovation management while others do not care can still be successful within their performance.

In Chapter 3, I will discuss the research method that I plan to use during this study and the details of how I will conduct the research, including the methodology, such as the

population, sampling, and sampling procedures, how I will recruit participants, and the

instrumentation used. Finally, in Chapter 3, I will discuss the different threats of validity

and how to process them along with ethical procedures.

Chapter 3: Research Method

The purpose of this quantitative correlational study was to understand and interpret how organizations manage innovation, and, if an organization is managing innovation, how it relates to the organization's performance. To address the gap in the literature on managing innovation and how it relates to an organization's performance, I surveyed participants from organizations and analyzed the results pertaining to the research questions of how the relationship between managing innovation and the organization's performance itself while also finding a theme of consumer acceptance in innovative products or services.

In this chapter, I explain the research design and rationale, my role as the researcher, methodology, sample size, research approach, and sampling technique that is utilized. I also describe how I ensured that the research conducted is trustworthy that focus on issues of trustworthiness, transferability, confirmability, ethical procedures, and credibility. The components of this chapter also include the instrumentation used for data collection, my data analysis plan, and the logic in recruiting my participants. I conclude by providing a summary of Chapter 3 and preview of Chapter 4.

Research Design and Rationale

The research questions directed this quantitative study: What is the relationship between innovation management and an organization's performance? And what is the relationship between innovation management and consumer acceptance? The idea of this correlational quantitative study was to understand how innovation management is utilized to increase the consumer acceptance of new technologies introduced and how it affects

the organization's performance. Essentially, how can an organization maximize its profits when introducing a new technology that is either a product or service? The dependent variable was the consumer user acceptance, whereas the IT innovation category was the predictor variable.

For this study's design to work, a correlation design was selected to test the relationships between the variables. The frameworks selected for this study—innovation diffusion theory, UTAUT, theory of economic development, technology acceptance model, and innovation resistance theory—relate to the study because the theories relate to innovation and acceptance through consumers. Although five frameworks were considered, each is relevant to measuring innovation and consumer acceptance within their respective areas.

The correlation quantitative design was a good fit to test both the dependent and independent variables because the survey gathered data of the experiences of others. Qualitative designs focus more on personal choices and experiences and take those experiences into consideration, causing a possible bias in this research design. Combining qualitative and quantitative studies is where mixed methods approach come into play (Denton, 2022); mixed-methods and qualitative designs were reviewed and considered for this study but were not selected as they were not a good fit for this type of study where the goal is to understand the technology acceptance among consumers and innovation management.

Methodology

Population

As described in Chapter 1, the general population of this study are employees within any organization either utilizing innovation management or not utilizing innovation management, with a minimum of 500 employees and no more than 1,500 employees in total, making the organizations small to medium-sized business, and physically located within the United States of America.

The primary target of participants surveyed were innovation managers and consumers of innovative products or services. Minimum employment experience was not necessary but was categorized in the results. Other population considerations included employees who work full-time for an organization (36+ hours per week). Race, age, religious affiliations, sexual orientation, gender, or ethnic origins were initially going to be documented but not considered to qualify for this research study; however, it was decided that this information would not be collected.

G*Power 3.1 is a power calculation utilized by researchers to determine the sample size when performing bivariate analysis. To determine the appropriate sample size, I conducted a G*Power analysis. Figure 2 is the graphical interpretation of the calculation used to determine the correct sample size of participants for this research study.

Figure 2

G*Power Analysis Detailing Sample Size
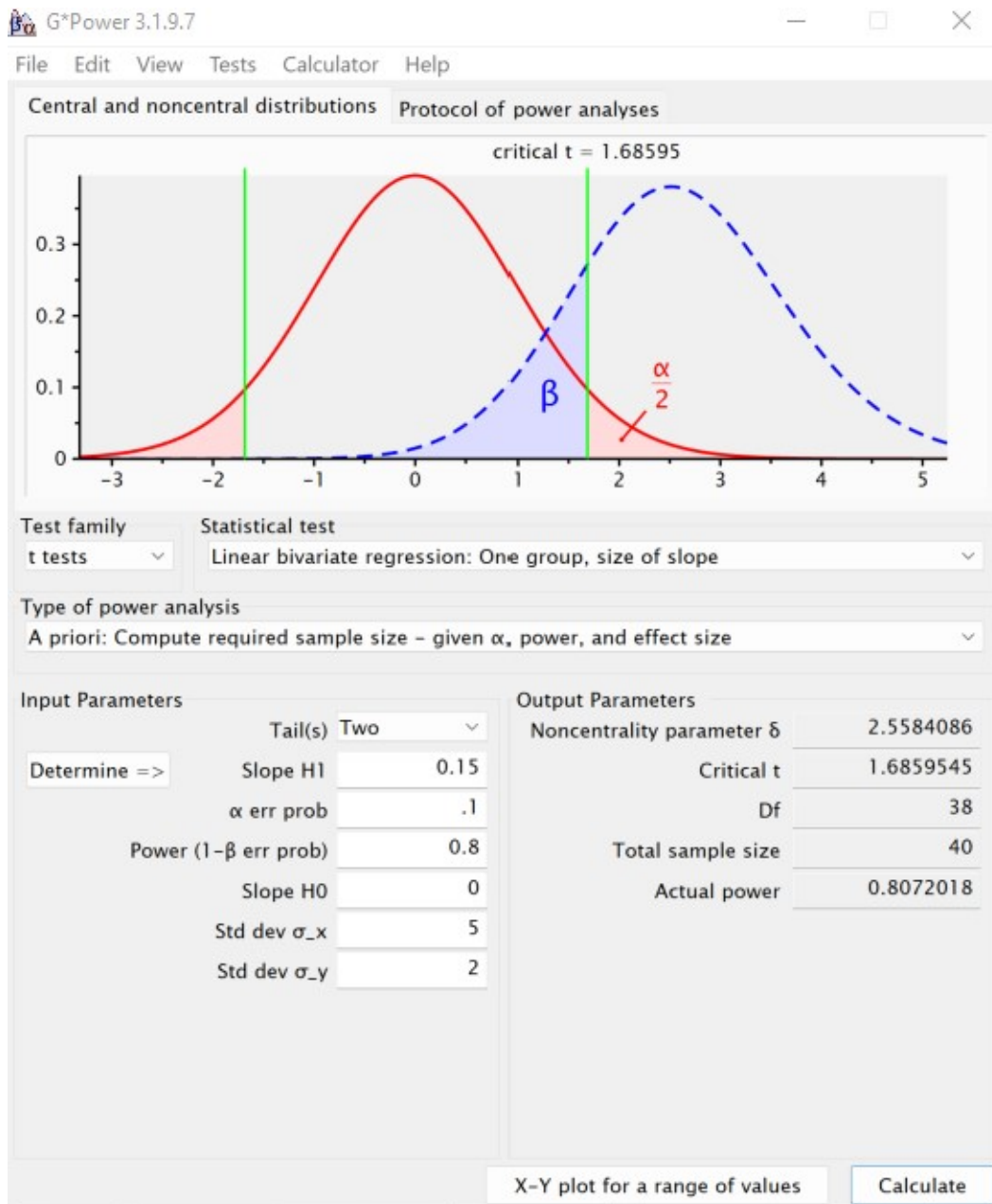
Note. Graphical model of G*Power3.1 analysis to determine the sample size.

A minimum of 40 participants was ideal for the consideration of this research study, but not all participants were expected to complete the entire study. During the recruitment process, individuals were given a set of expectations for the process of the study and an incentive was provided for those who completed all three rounds of the study: a $5 Amazon gift card and an electronic copy of the final research dissertation study summary.

Sampling and Sampling Procedures

Convenience sampling is a technique that can be justified for qualitative and quantitative studies. Convenience sampling is also known as haphazard sampling, where a group of participants meet specific criteria and are willing to participate (Etikan et al., 2016). I used convenience sampling for this study as it is suggested for a quantitative study in this nature (Etikan et al., 2016). Convenience sampling is a type of nonrandom sampling where participants of a target population that meet specific criteria are used for a research study. Purposive sampling was considered but was not selected because the purposive sampling technique is not ideal in a quantitative study as it cannot be utilized when variables are adopted (Etikan et al., 2016).

Convenience sampling is referred to as "researching subjects of the population that are easily accessible to the researcher (Etikan et al., 2016, p.10)." As described in Chapter 1, participants were surveyed who met the minimum criteria. Individuals who work in a full-time organization (36+ hours per week) where innovation is either managed or unmanaged, or, accepted or unaccepted.

Procedures for Recruitment, Participation, and Data Collection

This section includes the plans of how participants were requested to join the study, the level of their participation, and the data collection procedures. For this study, I initially proposed a three series survey. The results from Round 1 would be used to create the Round 2 survey questions, and Round 3 questions would be created based on the results from Round 2. However, it was decided that a single round of questions would be used. The recruitment tool used was LinkedIn, a professional social media platform. My LinkedIn profile was already set up and with over 1,500 professional connections, which gave me immediate access to the desired population for this research study.

Where Data Were Collected

- Participants completed electronic surveys. They were recruited via social media groups such as LinkedIn.

- Qualification criteria were confirmed during the informed consent process for each participant.

- A link to the survey was posted on my LinkedIn board. The link was shareable to allow my immediate connections to share to their network on LinkedIn.

- Each survey contained 20 questions and was designed to take no more than 20 minutes to complete in full within one sitting.

Who Collected the Data

- An application called Survey Monkey (https://www.surveymonkey.com) was used as the data collection mechanism.

- Survey Monkey has a free version allowing up to 10 questions and 40 participants. An unlimited version is available for a monthly or annual fee. Because my survey had 20 questions, I purchased the advantage plan, which allowed me to create a survey with an unlimited number of questions and an unlimited number of surveys.

- To become familiar with the application and data collection method, a minimum of three surveys was sent to me to simulate the data collection process and become familiar with the SurveyMonkey application.

Frequency of Data Collection Events

- One link to the research survey was created and posted on my LinkedIn profile. At the end of the first week of the link being posted, if no participants had given their consent, another post was to be posted to my LinkedIn profile and a logged note for the week would state that no participants were selected during the current week.

- When 40 participants were selected and reached, the survey was to close and participants would no longer be allowed to submit their survey responses.

- Participants were asked to provide their responses within after reading and accepting the informed consent page.

- Unanswered items were recorded as "No Response" during the data collection.

How Participants Could Exit the Study

- Upon each survey given, the questions were analyzed of each participant. When the results are finalized and the research study has been published, a copy will be emailed to each participant thanking them for their time and informing them that their participation is no longer needed.

- If a participant had asked to be removed, I would have recorded the result as "no response and early exit participant." A thank-you email would also have been sent to them stating their time and participation is no longer needed.

- No respondents asked to be removed from the research study or research collection phase.

Follow-Up Procedures

- If additional information was required from one or more participants, an additional round of surveys would be added to clarify questions.

- If additional information was required that could not be obtained in a survey, an email would be sent to the participants for clarification and their responses would be recorded with such comments.

Instrumentation and Operationalization of Constructs

The data collection instrument for each round of surveys was an electronic survey created using SurveyMonkey. An attachment with a consent form for participants indicating their voluntary consent was sent with each round of surveys. The specific link was emailed to each participant for each round.

In the study developed by Lopez-Nicolas and Meroño-Cerdán (2011), which concerned SMEs knowledge management, innovation, and performance, the researchers conducted a study to survey 310 Spanish firms and found the relationship between knowledge management, innovation, and firm performance. In their research, the survey used were close-ended questions and pretested on CEOs of five different companies.

To ensure the reliability of the data collected, predictive validity was used by administering a second round of survey questions to confirm the understanding of the results from Round 1. Round 2 survey questions and answers were also used to determine any themes emerging from the responses of the participants. A spreadsheet was utilized to track the dates/times the survey was emailed to each participant and the dates the response from each participant was received or recorded as "no response."

Data Analysis Plan

As stated in Chapter 1, The social problem is that management innovation being implemented within an organization is limited even though it has been receiving attention over the past few years (Birkinshaw et al., 2008). The specific management problem is the limited understanding of how innovation management relates to the organization's performance. The research questions that directed this study, along with their corresponding hypotheses, are as follows:

- RQ1: What is the relationship between management innovation and an organization's performance?

  $H_0 1$: There is no relationship between management innovation and an organization's performance.

H_a1: There is a relationship between management innovation and an

organization's performance.

- RQ2: What is the relationship between innovation management and consumer

    acceptance?

    H_02: There is no relationship between innovation management and consumer

    acceptance.

    H_a2: There is a relationship between innovation management and consumer

    acceptance.

Data cleaning is the process to ensure your data is ready to analyze. To prepare

the data analysis, the following data analysis actions were performed:

1. Data was collected via Survey Monkey and downloaded by me.

2. Data underwent a cleaning process before being analyzed.

3. A statistical analysis was performed on each of the variables (including the

    demographic variables).

4. A bivariate analysis such as the Pearson correlation analysis was performed

    on RQ1.

5. Multiple Pearson correlation analyses were performed on RQ2.

6. If the assumption of the correlation analyses was incorrect, Spearman's

    correlation analysis would be used.

Quantitative researchers use multiple analysis to determine the relationship

between an independent and dependent variable. For this research study, multiple

analyses were tested and verified to find any relationships. At a minimum, the multiple

linear regression analysis were to be utilized to compare and interpret the data collected. To do this, data analysis software assisted in data coding.

To test the first hypotheses: there is no relationship between management innovation and an organization's performance versus there is a relationship between management innovation and an organization's performance the first round of survey questions will be simple multiple-choice answers such as defining innovation management, is innovation management utilized in their workplace. An open-ended question will also be asked of all the participants that will allow the participants to state additional innovation management or organization performance strategies within their organization. To test the second hypotheses: there is a relationship between management innovation and an organization's performance, the first round of survey questions will be simple, multiple-choice answers such as defining organization's performance and how organization performance is rated successful or unsuccessful within their organizations. An open-ended question will also be asked of all the participants that will allow the participants to state additional information on innovation management and organization performance strategies.

To test the second research questions hypotheses: there is no relationship between innovation management and consumer acceptance, and there is a relationship between innovation management and consumer acceptance, a second round of surveys will question all participants be simple multiple-choice answers such as defining consumer acceptance and if it is used in conjunction with innovation management in their workplace. An open-ended question will also be asked of all the participants that will

allow the participants to state additional consumer acceptance strategies used within their organization.

Data gathered from Round 1 in SurveyMonkey will be analyzed by using Microsoft Excel will be coded appropriately. The other two rounds of surveys will be used to understand the details on innovation management, consumer acceptance, and organization performance. For the open-ended question at the end of each round of each survey, the data captured in the text format will not be limited, therefore; NVivo, a qualitative data analysis software may be utilized to determine a theme. MAXQDA, also a qualitative data analysis application will be a software application considered to help identify themes from each round of surveys.

Both software applications have a free version or trial. During the data collection phase and analysis, it will be determined then if either software application will need to be paid for in full for the duration of this research study. Although I am not familiar with either of these software applications, if either one shows to help in the data analysis phase, I will determine then to seek additional help by viewing tutorials or reviewing the help logs on how to properly maximize the software application.

When all data has been collected and analyzed, a process of data cleaning will be completed. By reviewing the data to detect any errors from the participants' surveys, verify any missing data such as incomplete surveys, and review any duplicate responses, it will help the researcher to validify the accuracy of data during the review process.

Threats to Validity

External Validity

Validity to data ensures that the research study excludes biases. "External validity is threatened when a study does not take into account the interactions of variables in the real world" (Cuncic, 2021). External validity confirms that the results acquired from the study are generalizable beyond the context of the study (Druckman et al., 2011). A concern of external validity of the data may be due to the limited sample size of the study. While the focus is on small to medium-sized organizations, the population and the factor of time may become a concern.

The results of this study may be limited and not be able to come to the same interpretations of the data if the sample size is larger or within a different region. To help with validating the external factors, the committee chair and member(s) will be asked to review the data collection procedure. To help alleviate external validity, a test study group will be used to test the results of the research study prior.

Internal Validity

Internal validity makes it potential to reduce alternative findings to the study (Cicnic, 2021). Internal validity issues such as attrition is a possibility when a research participant decides to not complete the study in all three rounds of surveys, causing a "no response" answer. Bias among the participants is also an internal validity of data concern. To help reduce the bias of participants, the researcher will assure each participant that their answers are voluntary and that their answers will be kept confidential. Answering

each round of surveys independently will also help reduce the bias in each participants' answers.

Maturation describes the impact of time as a variable within a study and during the time of the study, possibly, a participant may naturally change (Cicnic, 2021). The history of current events also deals with a timely selection of answers. To avoid natural maturation and history of current events, each round of surveys will be given in a timely manner of within one week so that participants' answers are not easily changed drastically.

Construct Validity

Construct validity affirms the research instrument provides support to the framework chosen within the conducted research (Nachmias & Nachmias, 2008). Construct validity is also measuring what was intended to be measured (Nachmias & Nachmias, 2008). Bias within the researcher or participant is an example of construct validity. To ensure that the researcher is measuring the intended results; masking or blinding the true purpose of the study can be used. By testing the correlations of the results from each survey round, the researcher will be able to measure the construct validity.

Ethical Procedures

The Institutional Review Board (IRB) is comprised of individuals who ensure the privacy and confidentiality of human subjects' rights during a research study (Weatherhold, 2022). A deep understanding and overview of the IRB Research Ethics Approval Checklist was reviewed to ensure that each recruitment would have consent,

the research procedures would ensure privacy during the data collection phases; names or contact information would not be made public but withheld and only known to me. To address the checklist provided by Walden's IRB, prior to the survey, an informed consent document was provided to all participants to address three areas: information, comprehension, and voluntariness.

Participants will be given a simple description of the purpose of the study that will include any risks identified in the Invitation and Consent Form. The consent was written in a manner that is easy to understand and comprehend while also highlighting that the research study of their participation is completely voluntarily and may drop out at any time. All participants have the right of privacy by not identifying themselves to myself or in the participant survey which was reviewed by the IRB.

Any participant that withdraws from the study will have their information deleted which includes survey responses and any other details that correlate to that participant. Ensuring privacy and confidentiality to all participants is a high priority to the researcher. Protection of the data obtained from this research study will be encrypted and archived for a minimum of five years to ensure the applicable storage of the data acquired and the research study results. Any ethical concerns in my research included protection from any harm by the informed consent. Hence, I used did not engage in any research that harms human participants in any method.

Summary

In Chapter 3, I supported my reasoning for selecting the theoretical foundation as the most suitable methodology for answering my research question. Upon reviewing the

literature, I delivered the elaborate sections which include the participant selection, the research instrument use, my procedures for recruiting participants, participation, and data collection along with the analysis of the data collection.

The results of the study are discussed in detail in Chapter 4. Chapter 4 will contain the demographics of the participants, data collection, data analysis, evidence of trustworthiness, results, and a summary of the chapter. The data will be provided in tables and graphs for each round of surveys for the participants and the survey results will be provided in full within the appendices.

Chapter 4: Results

The purpose of this quantitative correlational study was to determine how innovation management correlates with consumer acceptance and organization performance. The following research questions guided this quantitative study: What is the relationship between management innovation and an organization's performance; and what is the relationship between innovation management and consumer acceptance? For the first research question, the hypotheses were that there is no relationship between management innovation and an organization's performance, or that there is a relationship between management innovation and an organization's performance. For the second research question, the hypotheses were that there is no relationship between innovation management and consumer acceptance, or that there is a relationship between innovation management and consumer acceptance.

This study did not require a pilot study and was only one survey that consisted of 20 questions, intended to be less than 15 minutes of a respondent's time. This chapter includes the details of the survey with the research setting, demographics, data collection, and the research study results. I end this chapter with a summary and transition to Chapter 5.

Research Setting

During the study, participants were able to complete one round of survey in their own time as allowed. Whether the participant took the survey at home, in a quiet setting, at their place of employment, the participant was given the instructions that the survey would take approximately 15 minutes and would be best taken in one sitting, without

interruptions. No concerns were raised by the participants as affecting their responses for the purpose of this research study, and no I recorded no concerns pertaining to the data collection.

Demographics

Participants were limited to individuals located in the United States who were either a consumer or knowledge manager within a small business. Initially, the demographics of each participant was going to be recorded but not reported in the findings of this study. However, during the approval process, the Walden IRB decided that it was best not to elicit or record such identifying information as gender, age, location within the United States, or industry of each participant. It was also determined that it would be best to complete one round of survey for each participant instead of the intended three rounds of survey as described in Chapter 3. My research study was finally approved by the Walden IRB on May 17, 2023. On May 19, the first collection of data was recorded.

Data Collection

As previously stated and described in Chapter 3, this research study was to be three rounds of surveys for the participants to complete. The Walden IRB expressed concern over the amount of data and said that I would be able to achieve my results in one round of surveys taking the participants time from 45 minutes to less than 15 minutes. When discussing this with the Walden IRB, the decision was made to cut the survey rounds from three surveys to one survey and still be able to achieve a successful research study without compromising results.

The survey was created in SurveyMonkey and posted on LinkedIn, which was viewable to my connections in LinkedIn and to those who shared my post within LinkedIn. The desirable number of participants needed to respond to my survey was 40, and 40 participants responded to the survey to end the collection of data. On May 19, 2023, I posted to LinkedIn my initial round of recruitment of participants. In this initial post, LinkedIn's analytics showed that approximately 558 of my connections had viewed or reacted to my initial post. One individual reshared my post to their network during this time. By May 23, I had received 40 survey responses. Although 40 responses were collected, I posted a reminder to my LinkedIn to my survey so that others may also take the survey on May 22. The survey was officially closed on May 23, 2023 as the participant level was met to continue with this research study.

Table 1 summarizes the collection information for the survey conducted. As described in Chapter 3, the survey would be opened until the 40-participant rate was met. It took 4 days total for the survey to reach its minimum participation rate. After the minimum participation rate was met, the survey was closed, and data were no longer collected after May 23, 2023.

Table 1

Data Collection Summary

Survey post on LinkedIn	Response rate	End date	Days
5/19/2023	38	05/21/2023	2
5/22/2023	2	5/23/2023	2

Originally, participants were to be asked to provide their responses within 72 hours of receiving their request of the survey, but because an invitation was not sent via

email, another LinkedIn post was shared with the link to the research study within 72 hours of the initial post recruiting for this research study.

The research survey consisted of 20 questions. The final two questions of the survey were open-ended for the participant to write as much or as little as they desired describing what products or services the participant easily accepts and what products or services the participant struggles to accept. The survey had a 100% response rate, but the last two open-ended questions were answered by 31/40 respondents.

After the data collection was completed, the data were exported to a USB drive and encrypted to ensure the dependability of the survey results and the confirmability of the data collected during this process. Because this research study was one round of collected data, if it were duplicated by any other researchers, they would be able to arrive at the same or similar results that are interpreted in the Study Results section.

After the data were exported to a USB drive, I also exported the data into the program IBM SPSS Statistics. IBM SPSS Statistics is an application that allows me, the researcher, to quickly conduct and interpret graphical results from the participants' responses using the Pearson bivariate correlation.

The Pearson bivariate correlation r was used to measure the innovation management between the relationship of the variables. The statistical test analyzed the difference between innovation management and the organization's performance, whereas the control variable measured the consumer's acceptance of a product or service. When comparing each variable by question, I strategized each variable and named appropriately

to determine that the question corresponded to either the variables innovation, consumer acceptance, or organizational performance.

Study Results

In this section, the procedures for analyzing the data collected from the survey are reviewed in detail. The data analysis function of SurveyMonkey was entered into IBM SPSS, which helped format and develop the results. The graphs used to help visualize the data were produced by IBM SPSS, and I utilized Microsoft Excel to code, categorize, and determine the themes of the data.

The primary goal of the survey was to help form an answer to the two research questions of this study: What is the relationship between management innovation and an organization's performance; and what is the relationship between innovation management and consumer acceptance? The full results are in Appendix D where all graphs from SurveyMonkey are shown for the full set of 20 questions.

I used IBM SPSS to perform the analysis on each research question. I performed the bivariate correlation with innovation management as the independent variable and organization performance as the dependent variable. Questions 1 through 5 represent innovation management, the independent variable. Questions 6 through 13 represent organization performance, the dependent variable. Finally, Questions 14 through 18 represent the consumer acceptance, the control variable. Below is a summary of the first 18 questions of the frequencies and percentages analyses of the 18 questions in Table 2.

Within the data surveyed, there were several positive correlations between products not offered and the following variables: Adding new products, improving

products, organization has more market share, there was rapid growth, more profitable, and the organizations performance from the previous 12 months and 60 months respectively.

When I started to go through the themes and categories of products or services the respondents easily accepted, the following categories were found to be common among the created: technical, convenience/efficiency, various existing products or services, beauty cosmetics, trials, food and other. Respondents' answers where neither category was mentioned were categorized as other. In Figure 5, a pie chart shows the different categories and amount of respondents' answers to each category of what product or services consumers accept.

In Question 19, the respondents were asked to type as much or as little as they pleased displaying what types of products or services they easily accept. Of the 40 respondents, 10 respondents skipped the question and did not provide any answers. Table F1 are the respondents' answers. In Question 20, the respondents were asked to type as much or as little as they pleased displaying what types of products or services they easily struggle to accept. Of the 40 respondents, 11 respondents skipped the question or did not provide any answers. Table F2 are the respondents' answers.

When I started to go through the themes and categories of products or services the respondents struggled with, the following categories were created: technical, various existing products or services, beauty cosmetics, investments, gym, and others. Respondents' answers where neither category was mentioned, these answers were categorized as other. In Figure 6, a pie chart was used to show the different categories

and amount of respondents' answers to each category of what product or services consumers struggle with accepting.

In specific comments, a theme was noticed in specific technical products and/or services that were already existent. Technology has been defined as anything newer in the past 5 years. With the comments specifically to technology that was either a technical product or a technical service, it was not accepted. The category of services was closely looked at also and several of participants that stated various services that reduce interaction with a live person were also not easily accepted. After briefing over the data, I utilized IBM SPSS to perform the Pearson correlation analysis among the various variables and create scatterplots. To help double-check my work, I then used the website IntellectusStatistics to help interpret the data.

A Pearson correlation analysis was conducted among Q1LaunchProducts, Q2RangeOfProNotOffered, Q3AddNewProducts, Q4ImproveProducts, Q5ChangeProducts, Q6Reposition, Q7Profitable, Q8MoreMarketShare, Q9RapidGrowth, Q10PerformancePrevious12Months, Q11PerformancePrevious60Months, Q12PerformanceMetPrevious12Months, and Q13PerformanceMetPrevious60Months. Cohen's standard was used to evaluate the strength of the relationships, where coefficients between .10 and .29 represent a small effect size, coefficients between .30 and .49 represent a moderate effect size, and coefficients above .50 indicate a large effect size (Cohen, 1988).

A Pearson correlation requires that the relationship between each pair of variables is linear (Conover & Iman, 1981). This assumption is violated if there is curvature among

the points on the scatterplot between any pair of variables. Figure 1-Figure 41 presents

the scatterplots of the correlations. A regression line has been added to assist the

interpretation. A Mardia's test was conducted for each pair of variables to determine if

the variable pairings could have been produced by a bivariate normal distribution. The

results of Mardia's test was significant based on an alpha value of .05 for the following

variable pairings and suggests that it is unlikely for the variable pairings to have been

produced by a bivariate normal distribution: Q1LaunchProducts-

Q2RangeOfProNotOffered (p_{skew} = .008, p_{kurt} = .024), Q2RangeOfProNotOffered-

Q3AddNewProducts (p_{skew} = .005, p_{kurt} = .101), Q2RangeOfProNotOffered-

Q4ImproveProducts (p_{skew} = .048, p_{kurt} = .119), Q2RangeOfProNotOffered-Q6Reposition

(p_{skew} = .026, p_{kurt} = .613), Q2RangeOfProNotOffered-Q7Profitable (p_{skew} = .018, p_{kurt} =

.384), Q2RangeOfProNotOffered-Q10PerformancePrevious12Months (p_{skew} = .022, p_{kurt}

= .811), Q2RangeOfProNotOffered-Q11PerformancePrevious60Months (p_{skew} = .032,

p_{kurt} = .573), Q2RangeOfProNotOffered-Q12PerformanceMetPrevious12Months (p_{skew} =

.015, p_{kurt} = .865), Q2RangeOfProNotOffered-Q13PerformanceMetPrevious60Months

(p_{skew} = .007, p_{kurt} = .970), Q3AddNewProducts-Q5ChangeProducts (p_{skew} = .005, p_{kurt} =

.649), Q3AddNewProducts-Q6Reposition (p_{skew} = .009, p_{kurt} = .101),

Q3AddNewProducts-Q7Profitable (p_{skew} = .024, p_{kurt} = .960), Q3AddNewProducts-

Q10PerformancePrevious12Months (p_{skew} = .009, p_{kurt} = .575), Q5ChangeProducts-

Q12PerformanceMetPrevious12Months (p_{skew} = .023, p_{kurt} = .789), Q7Profitable-

Q10PerformancePrevious12Months (p_{skew} = .015, p_{kurt} = .209), Q7Profitable-

Q13PerformanceMetPrevious60Months (p_{skew} = .041, p_{kurt} = .099), and

Q12PerformanceMetPrevious12Months-Q13PerformanceMetPrevious60Months (p_{skew} =

.010, p_{kurt} = .212). This indicates that the bivariate normality assumption is violated. The

results of the Mardia's test can be found in Table 2.

Table 2

Mardia's Test Results for Each Variable Pairing

Combination	Skew statistic	p_{skew}	Kurtosis statistic	p_{kurt}
Q1LaunchProducts-Q2RangeOfProNotOffered	13.81	.008	2.25	.024
Q1LaunchProducts-Q3AddNewProducts	5.39	.250	-0.55	.585
Q1LaunchProducts-Q4ImproveProducts	2.01	.734	-1.12	.263
Q1LaunchProducts-Q5ChangeProducts	4.35	.361	-0.85	.396
Q1LaunchProducts-Q6Reposition	1.40	.845	-0.83	.405
Q1LaunchProducts-Q7Profitable	3.77	.438	-0.24	.809
Q1LaunchProducts-Q8MoreMarketShare	5.32	.256	-0.63	.530
Q1LaunchProducts-Q9RapidGrowth	4.73	.316	-1.35	.176
Q1LaunchProducts-Q10PerformancePrevious12Months	2.35	.671	-1.19	.236
Q1LaunchProducts-Q11PerformancePrevious60Months	2.45	.654	-1.45	.147
Q1LaunchProducts-Q12PerformanceMetPrevious12Months	2.00	.736	-0.82	.413
Q1LaunchProducts-Q13PerformanceMetPrevious60Months	4.07	.397	-0.54	.588
Q2RangeOfProNotOffered-Q3AddNewProducts	14.72	.005	1.64	.101
Q2RangeOfProNotOffered-Q4ImproveProducts	9.58	.048	1.56	.119
Q2RangeOfProNotOffered-Q5ChangeProducts	7.21	.125	0.01	.990
Q2RangeOfProNotOffered-Q6Reposition	11.06	.026	0.51	.613
Q2RangeOfProNotOffered-Q7Profitable	11.89	.018	0.87	.384
Q2RangeOfProNotOffered-Q8MoreMarketShare	5.59	.232	0.83	.404
Q2RangeOfProNotOffered-Q9RapidGrowth	8.31	.081	0.74	.458
Q2RangeOfProNotOffered-Q10PerformancePrevious12Months	11.47	.022	-0.24	.811
Q2RangeOfProNotOffered-Q11PerformancePrevious60Months	10.59	.032	-0.56	.573
Q2RangeOfProNotOffered-Q12PerformanceMetPrevious12Months	12.30	.015	-0.17	.865
Q2RangeOfProNotOffered-Q13PerformanceMetPrevious60Months	14.22	.007	0.04	.970
Q3AddNewProducts-Q4ImproveProducts	6.61	.158	-0.02	.986
Q3AddNewProducts-Q5ChangeProducts	15.08	.005	0.45	.649
Q3AddNewProducts-Q6Reposition	13.55	.009	1.64	.101
Q3AddNewProducts-Q7Profitable	11.23	.024	0.05	.960
Q3AddNewProducts-Q8MoreMarketShare	7.54	.110	0.66	.511
Q3AddNewProducts-Q9RapidGrowth	9.09	.059	0.66	.509
Q3AddNewProducts-Q10PerformancePrevious12Months	13.56	.009	-0.56	.575
Q3AddNewProducts-Q11PerformancePrevious60Months	7.74	.102	-0.58	.559
Q3AddNewProducts-Q12PerformanceMetPrevious12Months	9.18	.057	-0.13	.894
Q3AddNewProducts-Q13PerformanceMetPrevious60Months	8.90	.064	-0.16	.876
Q4ImproveProducts-Q5ChangeProducts	6.10	.192	-0.54	.587
Q4ImproveProducts-Q6Reposition	3.44	.487	-0.41	.682
Q4ImproveProducts-Q7Profitable	4.11	.391	-0.08	.935
Q4ImproveProducts-Q8MoreMarketShare	2.82	.589	-0.53	.593
Q4ImproveProducts-Q9RapidGrowth	2.83	.588	-1.13	.260
Q4ImproveProducts-Q10PerformancePrevious12Months	6.15	.188	-1.04	.300

Combination	Skew statistic	p_{skew}	Kurtosis statistic	p_{kurt}
Q4ImproveProducts-Q11PerformancePrevious60Months	6.53	.163	-0.91	.360
Q4ImproveProducts-Q12PerformanceMetPrevious12Months	7.63	.106	-0.52	.602
Q4ImproveProducts-Q13PerformanceMetPrevious60Months	6.30	.178	-0.69	.492
Q5ChangeProducts-Q6Reposition	3.80	.434	-0.16	.876
Q5ChangeProducts-Q7Profitable	4.35	.361	0.04	.970
Q5ChangeProducts-Q8MoreMarketShare	4.97	.290	-0.79	.429
Q5ChangeProducts-Q9RapidGrowth	4.75	.314	-0.41	.680
Q5ChangeProducts-Q10PerformancePrevious12Months	4.09	.394	-0.69	.491
Q5ChangeProducts-Q11PerformancePrevious60Months	4.40	.354	-0.84	.402
Q5ChangeProducts-Q12PerformanceMetPrevious12Months	11.32	.023	0.27	.789
Q5ChangeProducts-Q13PerformanceMetPrevious60Months	6.31	.177	-0.63	.525
Q6Reposition-Q7Profitable	2.40	.663	-0.03	.976
Q6Reposition-Q8MoreMarketShare	2.35	.671	-0.47	.642
Q6Reposition-Q9RapidGrowth	4.90	.298	-0.18	.855
Q6Reposition-Q10PerformancePrevious12Months	2.72	.606	-1.02	.307
Q6Reposition-Q11PerformancePrevious60Months	5.00	.287	-0.96	.339
Q6Reposition-Q12PerformanceMetPrevious12Months	3.13	.536	-0.94	.348
Q6Reposition-Q13PerformanceMetPrevious60Months	4.51	.341	-0.75	.453
Q7Profitable-Q8MoreMarketShare	6.10	.192	0.22	.824
Q7Profitable-Q9RapidGrowth	6.42	.170	-0.02	.983
Q7Profitable-Q10PerformancePrevious12Months	12.41	.015	1.26	.209
Q7Profitable-Q11PerformancePrevious60Months	4.39	.356	0.10	.923
Q7Profitable-Q12PerformanceMetPrevious12Months	6.97	.137	1.02	.309
Q7Profitable-Q13PerformanceMetPrevious60Months	9.96	.041	1.65	.099
Q8MoreMarketShare-Q9RapidGrowth	3.73	.444	-0.44	.661
Q8MoreMarketShare-Q10PerformancePrevious12Months	4.12	.390	-0.56	.575
Q8MoreMarketShare-Q11PerformancePrevious60Months	5.35	.253	-1.07	.285
Q8MoreMarketShare-Q12PerformanceMetPrevious12Months	3.40	.494	-0.36	.715
Q8MoreMarketShare-Q13PerformanceMetPrevious60Months	4.97	.291	-0.45	.653
Q9RapidGrowth-Q10PerformancePrevious12Months	2.64	.620	-1.32	.188
Q9RapidGrowth-Q11PerformancePrevious60Months	6.68	.154	-0.08	.936
Q9RapidGrowth-Q12PerformanceMetPrevious12Months	4.50	.342	-0.47	.636
Q9RapidGrowth-Q13PerformanceMetPrevious60Months	3.62	.459	-0.81	.419
Q10PerformancePrevious12Months-Q11PerformancePrevious60Months	4.70	.320	-1.17	.244
Q10PerformancePrevious12Months-Q12PerformanceMetPrevious12Months	2.75	.601	-1.10	.270
Q10PerformancePrevious12Months-Q13PerformanceMetPrevious60Months	3.50	.478	-1.08	.282
Q11PerformancePrevious60Months-Q12PerformanceMetPrevious12Months	4.08	.395	-0.51	.610
Q11PerformancePrevious60Months-Q13PerformanceMetPrevious60Months	5.84	.211	-0.82	.413
Q12PerformanceMetPrevious12Months-Q13PerformanceMetPrevious60Months	13.17	.010	1.25	.212

Results

   The result of the correlations was examined using the Holm correction to adjust

for multiple comparisons based on an alpha value of .05. A significant positive

correlation was observed between Q2RangeOfProNotOffered and Q3AddNewProducts,

with a correlation of .55, indicating a large effect size (p = .018, 95.00% CI = [.28, .73]).

This suggests that as Q2RangeOfProNotOffered increases, Q3AddNewProducts tends to

increase. A significant positive correlation was observed between Q5ChangeProducts and

Q6Reposition, with a correlation of .53, indicating a large effect size (p = .030, 95.00%

CI = [.26, .72]). This suggests that as Q5ChangeProducts increases, Q6Reposition tends

to increase. A significant positive correlation was observed between Q6Reposition and

Q12PerformanceMetPrevious12Months, with a correlation of .51, indicating a large

effect size (p = .048, 95.00% CI = [.24, .71]). This suggests that as Q6Reposition

increases, Q12PerformanceMetPrevious12Months tends to increase. A significant

positive correlation was observed between Q6Reposition and

Q13PerformanceMetPrevious60Months, with a correlation of .58, indicating a large

effect size (p = .007, 95.00% CI = [.32, .75]). This suggests that as Q6Reposition

increases, Q13PerformanceMetPrevious60Months tends to increase.

   A significant positive correlation was observed between Q7Profitable and

Q8MoreMarketShare, with a correlation of .76, indicating a large effect size (p < .001,

95.00% CI = [.58, .86]). This suggests that as Q7Profitable increases,

Q8MoreMarketShare tends to increase. A significant positive correlation was observed

between Q7Profitable and Q9RapidGrowth, with a correlation of .57, indicating a large

effect size ($p = .009$, 95.00% CI = [.31, .75]). This suggests that as Q7Profitable

increases, Q9RapidGrowth tends to increase. A significant positive correlation was

observed between Q8MoreMarketShare and Q9RapidGrowth, with a correlation of .64,

indicating a large effect size ($p < .001$, 95.00% CI = [.41, .79]). This suggests that as

Q8MoreMarketShare increases, Q9RapidGrowth tends to increase. A significant positive

correlation was observed between Q9RapidGrowth and

Q10PerformancePrevious12Months, with a correlation of .52, indicating a large effect

size ($p = .035$, 95.00% CI = [.25, .72]). This suggests that as Q9RapidGrowth increases,

Q10PerformancePrevious12Months tends to increase. A significant positive correlation

was observed between Q9RapidGrowth and Q11PerformancePrevious60Months, with a

correlation of .53, indicating a large effect size ($p = .032$, 95.00% CI = [.26, .72]). This

suggests that as Q9RapidGrowth increases, Q11PerformancePrevious60Months tends to

increase.

A significant positive correlation was observed between

Q10PerformancePrevious12Months and Q11PerformancePrevious60Months, with a

correlation of .58, indicating a large effect size ($p = .007$, 95.00% CI = [.32, .75]). This

suggests that as Q10PerformancePrevious12Months increases,

Q11PerformancePrevious60Months tends to increase. A significant positive correlation

was observed between Q10PerformancePrevious12Months and

Q12PerformanceMetPrevious12Months, with a correlation of .67, indicating a large

effect size ($p < .001$, 95.00% CI = [.45, .81]). This suggests that as

Q10PerformancePrevious12Months increases, Q12PerformanceMetPrevious12Months

tends to increase.

Another significant positive correlation was observed between

Q11PerformancePrevious60Months and Q12PerformanceMetPrevious12Months, with a

correlation of .59, indicating a large effect size (p = .005, 95.00% CI = [.34, .76]). This

suggests that as Q11PerformancePrevious60Months increases,

Q12PerformanceMetPrevious12Months tends to increase. A significant positive

correlation was observed between Q11PerformancePrevious60Months and

Q13PerformanceMetPrevious60Months, with a correlation of .67, indicating a large

effect size (p < .001, 95.00% CI = [.45, .81]). This suggests that as

Q11PerformancePrevious60Months increases, Q13PerformanceMetPrevious60Months

tends to increase. The final significant positive correlation was observed between

Q12PerformanceMetPrevious12Months and Q13PerformanceMetPrevious60Months,

with a correlation of .72, indicating a large effect size (p < .001, 95.00% CI = [.53, .84]).

This suggests that as Q12PerformanceMetPrevious12Months increases,

Q13PerformanceMetPrevious60Months tends to increase. No other significant

correlations were found. Table 3 and Table 4 present the results of the correlations.

Table 3

Pearson Correlation Matrix Among Q1LaunchProducts, Q2RangeOfProNotOffered,

Q3AddNewProducts, Q4ImproveProducts, Q5ChangeProducts, Q6Reposition,

Q7Profitable, Q8MoreMarketShare, Q9RapidGrowth,

Q10PerformancePrevious12Months, Q11PerformancePrevious60Months,

Q12PerformanceMetPrevious12Months, and Q13PerformanceMetPrevious60Months

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Q1LaunchProducts	-												
2. Q2RangeOfProNotOffered	.15	-											
3. Q3AddNewProducts	.22	.55*	-										
4. Q4ImproveProducts	.20	.47	.35	-									
5. Q5ChangeProducts	-.11	.27	.38	.19	-								
6. Q6Reposition	.11	.30	.41	.22	.53*	-							
7. Q7Profitable	.26	.18	.03	.24	.02	.30	-						
8. Q8MoreMarketShare	.29	.15	-.01	.29	.11	.19	.76*	-					
9. Q9RapidGrowth	.26	.21	.15	.38	.07	.31	.57*	.64*	-				
10. Q10PerformancePrevious12Months	.18	.32	.32	.42	.24	.45	.37	.24	.52*	-			
11. Q11PerformancePrevious60Months	.15	.04	.03	.16	.05	.34	.26	.03	.53*	.58*	-		
12. Q12PerformanceMetPrevious12Months	-.06	.32	.24	.39	.36	.51*	.26	.15	.41	.67*	.59*	-	
13. Q13PerformanceMetPrevious60Months	-.15	.17	.16	.37	.32	.58*	.34	.12	.44	.51	.67*	.72*	-

Note. *p

Table 4

Pearson Correlation Results Among Q1LaunchProducts, Q2RangeOfProNotOffered,

Q3AddNewProducts, Q4ImproveProducts, Q5ChangeProducts, Q6Reposition,

Q7Profitable, Q8MoreMarketShare, Q9RapidGrowth,

Q10PerformancePrevious12Months, Q11PerformancePrevious60Months,

Q12PerformanceMetPrevious12Months, and Q13PerformanceMetPrevious60Months

Combination	r	95.00% CI	n	p
Q1LaunchProducts-Q2RangeOfProNotOffered	.15	[-.17, .44]	40	1.000
Q1LaunchProducts-Q3AddNewProducts	.22	[-.10, .50]	40	1.000
Q1LaunchProducts-Q4ImproveProducts	.20	[-.12, .48]	40	1.000
Q1LaunchProducts-Q5ChangeProducts	-.11	[-.41, .21]	40	1.000
Q1LaunchProducts-Q6Reposition	.11	[-.21, .41]	40	1.000
Q1LaunchProducts-Q7Profitable	.26	[-.06, .53]	40	1.000
Q1LaunchProducts-Q8MoreMarketShare	.29	[-.03, .55]	40	1.000
Q1LaunchProducts-Q9RapidGrowth	.26	[-.06, .53]	40	1.000
Q1LaunchProducts-Q10PerformancePrevious12Months	.18	[-.14, .47]	40	1.000
Q1LaunchProducts-Q11PerformancePrevious60Months	.15	[-.17, .44]	40	1.000
Q1LaunchProducts-Q12PerformanceMetPrevious12Months	-.06	[-.37, .25]	40	1.000
Q1LaunchProducts-Q13PerformanceMetPrevious60Months	-.15	[-.44, .17]	40	1.000
Q2RangeOfProNotOffered-Q3AddNewProducts	.55	[.28, .73]	40	.018
Q2RangeOfProNotOffered-Q4ImproveProducts	.47	[.18, .68]	40	.156
Q2RangeOfProNotOffered-Q5ChangeProducts	.27	[-.04, .54]	40	1.000
Q2RangeOfProNotOffered-Q6Reposition	.30	[-.01, .56]	40	1.000
Q2RangeOfProNotOffered-Q7Profitable	.18	[-.14, .46]	40	1.000
Q2RangeOfProNotOffered-Q8MoreMarketShare	.15	[-.17, .44]	40	1.000
Q2RangeOfProNotOffered-Q9RapidGrowth	.21	[-.11, .49]	40	1.000
Q2RangeOfProNotOffered-Q10PerformancePrevious12Months	.32	[.01, .57]	40	1.000
Q2RangeOfProNotOffered-Q11PerformancePrevious60Months	.04	[-.28, .35]	40	1.000
Q2RangeOfProNotOffered-Q12PerformanceMetPrevious12Months	.32	[.01, .58]	40	1.000
Q2RangeOfProNotOffered-Q13PerformanceMetPrevious60Months	.17	[-.15, .46]	40	1.000
Q3AddNewProducts-Q4ImproveProducts	.35	[.05, .60]	40	1.000
Q3AddNewProducts-Q5ChangeProducts	.38	[.08, .62]	40	.806
Q3AddNewProducts-Q6Reposition	.41	[.12, .64]	40	.463
Q3AddNewProducts-Q7Profitable	.03	[-.28, .34]	40	1.000
Q3AddNewProducts-Q8MoreMarketShare	-.01	[-.32, .30]	40	1.000
Q3AddNewProducts-Q9RapidGrowth	.15	[-.17, .44]	40	1.000
Q3AddNewProducts-Q10PerformancePrevious12Months	.32	[.01, .57]	40	1.000
Q3AddNewProducts-Q11PerformancePrevious60Months	.03	[-.28, .34]	40	1.000
Q3AddNewProducts-Q12PerformanceMetPrevious12Months	.24	[-.08, .51]	40	1.000
Q3AddNewProducts-Q13PerformanceMetPrevious60Months	.16	[-.16, .45]	40	1.000
Q4ImproveProducts-Q5ChangeProducts	.19	[-.13, .47]	40	1.000
Q4ImproveProducts-Q6Reposition	.22	[-.10, .50]	40	1.000

Combination	r	95.00% CI	n	p
Q4ImproveProducts-Q7Profitable	.24	[-.07, .52]	40	1.000
Q4ImproveProducts-Q8MoreMarketShare	.29	[-.03, .55]	40	1.000
Q4ImproveProducts-Q9RapidGrowth	.38	[.08, .62]	40	.816
Q4ImproveProducts-Q10PerformancePrevious12Months	.42	[.12, .65]	40	.432
Q4ImproveProducts-Q11PerformancePrevious60Months	.16	[-.16, .45]	40	1.000
Q4ImproveProducts-Q12PerformanceMetPrevious12Months	.39	[.09, .62]	40	.750
Q4ImproveProducts-Q13PerformanceMetPrevious60Months	.37	[.07, .61]	40	.990
Q5ChangeProducts-Q6Reposition	.53	[.26, .72]	40	.030
Q5ChangeProducts-Q7Profitable	.02	[-.29, .33]	40	1.000
Q5ChangeProducts-Q8MoreMarketShare	.11	[-.21, .41]	40	1.000
Q5ChangeProducts-Q9RapidGrowth	.07	[-.25, .38]	40	1.000
Q5ChangeProducts-Q10PerformancePrevious12Months	.24	[-.08, .51]	40	1.000
Q5ChangeProducts-Q11PerformancePrevious60Months	.05	[-.27, .35]	40	1.000
Q5ChangeProducts-Q12PerformanceMetPrevious12Months	.36	[.05, .60]	40	1.000
Q5ChangeProducts-Q13PerformanceMetPrevious60Months	.32	[.01, .57]	40	1.000
Q6Reposition-Q7Profitable	.30	[-.01, .56]	40	1.000
Q6Reposition-Q8MoreMarketShare	.19	[-.13, .48]	40	1.000
Q6Reposition-Q9RapidGrowth	.31	[-.00, .57]	40	1.000
Q6Reposition-Q10PerformancePrevious12Months	.45	[.16, .66]	40	.249
Q6Reposition-Q11PerformancePrevious60Months	.34	[.04, .59]	40	1.000
Q6Reposition-Q12PerformanceMetPrevious12Months	.51	[.24, .71]	40	.048
Q6Reposition-Q13PerformanceMetPrevious60Months	.58	[.32, .75]	40	.007
Q7Profitable-Q8MoreMarketShare	.76	[.58, .86]	40	< .001
Q7Profitable-Q9RapidGrowth	.57	[.31, .75]	40	.009
Q7Profitable-Q10PerformancePrevious12Months	.37	[.07, .61]	40	.982
Q7Profitable-Q11PerformancePrevious60Months	.26	[-.06, .53]	40	1.000
Q7Profitable-Q12PerformanceMetPrevious12Months	.26	[-.05, .53]	40	1.000
Q7Profitable-Q13PerformanceMetPrevious60Months	.34	[.03, .59]	40	1.000
Q8MoreMarketShare-Q9RapidGrowth	.64	[.41, .79]	40	< .001
Q8MoreMarketShare-Q10PerformancePrevious12Months	.24	[-.08, .51]	40	1.000
Q8MoreMarketShare-Q11PerformancePrevious60Months	.03	[-.28, .34]	40	1.000
Q8MoreMarketShare-Q12PerformanceMetPrevious12Months	.15	[-.17, .44]	40	1.000
Q8MoreMarketShare-Q13PerformanceMetPrevious60Months	.12	[-.20, .41]	40	1.000
Q9RapidGrowth-Q10PerformancePrevious12Months	.52	[.25, .72]	40	.035
Q9RapidGrowth-Q11PerformancePrevious60Months	.53	[.26, .72]	40	.032
Q9RapidGrowth-Q12PerformanceMetPrevious12Months	.41	[.12, .64]	40	.463
Q9RapidGrowth-Q13PerformanceMetPrevious60Months	.44	[.15, .66]	40	.275
Q10PerformancePrevious12Months-Q11PerformancePrevious60Months	.58	[.32, .75]	40	.007
Q10PerformancePrevious12Months-Q12PerformanceMetPrevious12Months	.67	[.45, .81]	40	< .001
Q10PerformancePrevious12Months-Q13PerformanceMetPrevious60Months	.51	[.23, .71]	40	.055
Q11PerformancePrevious60Months-Q12PerformanceMetPrevious12Months	.59	[.34, .76]	40	.005
Q11PerformancePrevious60Months-Q13PerformanceMetPrevious60Months	.67	[.45, .81]	40	< .001
Q12PerformanceMetPrevious12Months-Q13PerformanceMetPrevious60Months	.72	[.53, .84]	40	< .001

Note. p-values adjusted using the Holm correction.

Pearson Correlation Analysis

Introduction

A Pearson correlation analysis was conducted among Q1LaunchProducts, Q2RangeOfProNotOffered, Q3AddNewProducts, Q4ImproveProducts, Q5ChangeProducts, Q15ConsumerAcceptNew, Q16ConsumerDissatisfiedProvideFeedback, Q17ConsumerAlwaysHasNewProducts, and Q18ConsumerAcceptionFirst. Cohen's standard was used to evaluate the strength of the relationships, where coefficients between .10 and .29 represent a small effect size, coefficients between .30 and .49 represent a moderate effect size, and coefficients above .50 indicate a large effect size (Cohen, 1988). A Pearson correlation requires that the relationship between each pair of variables is linear (Conover & Iman, 1981). This assumption is violated if there is curvature among the points on the scatterplot between any pair of variables. Figure E42 -Figure E50 presents the scatterplots of the correlations. A regression line has been added to assist the interpretation.

Some authors also consider bivariate normality to be an assumption of the Pearson correlation coefficient (Bonett & Wright, 2000; Chok, 2010). Bivariate normality was assessed by plotting the squared Mahalanobis distances for each pair of variables against the quantiles of a Chi-square distribution (DeCarlo, 1997; Field, 2017). In the scatterplot, the solid line represents the theoretical quantiles of a normal distribution. Normality can be assumed if the points form a relatively straight line. The scatterplots for normality are presented in Figure 51-Figure 59.

A Mardia's test was conducted for each pair of variables to determine if the variable pairings could have been produced by a bivariate normal distribution. The results of Mardia's test was significant based on an alpha value of .05 for the following variable pairings and suggests that it is unlikely for the variable pairings to have been produced by a bivariate normal distribution: Q1LaunchProducts-Q2RangeOfProNotOffered (p_{skew} = .008, p_{kurt} = .024), Q2RangeOfProNotOffered-Q3AddNewProducts (p_{skew} = .005, p_{kurt} = .101), Q2RangeOfProNotOffered-Q4ImproveProducts (p_{skew} = .048, p_{kurt} = .119), Q2RangeOfProNotOffered-Q15ConsumerAcceptNew (p_{skew} = .049, p_{kurt} = .971), Q2RangeOfProNotOffered-Q16ConsumerDissatisfiedProvideFeedback (p_{skew} = .012, p_{kurt} = .231), and Q3AddNewProducts-Q5ChangeProducts (p_{skew} = .005, p_{kurt} = .649). This indicates that the bivariate normality assumption is violated. The results of the Mardia's test can be found in Table 5.

Table 5

Mardia's Test Results for Each Variable Pairing

Combination	Skew Statistic	p_{skew}	Kurtosis Statistic	p_{kurt}
Q1LaunchProducts-Q2RangeOfProNotOffered	13.81	.008	2.25	.024
Q1LaunchProducts-Q3AddNewProducts	5.39	.250	-0.55	.585
Q1LaunchProducts-Q4ImproveProducts	2.01	.734	-1.12	.263
Q1LaunchProducts-Q5ChangeProducts	4.35	.361	-0.85	.396
Q1LaunchProducts-Q15ConsumerAcceptNew	2.03	.730	-1.71	.087
Q1LaunchProducts-Q16ConsumerDissatisfiedProvideFeedback	2.82	.588	-1.20	.230
Q1LaunchProducts-Q17ConsumerAlwaysHasNewProducts	0.97	.915	-1.08	.280
Q1LaunchProducts-Q18ConsumerAcceptionFirst	1.48	.830	-0.94	.349
Q2RangeOfProNotOffered-Q3AddNewProducts	14.72	.005	1.64	.101
Q2RangeOfProNotOffered-Q4ImproveProducts	9.58	.048	1.56	.119
Q2RangeOfProNotOffered-Q5ChangeProducts	7.21	.125	0.01	.990
Q2RangeOfProNotOffered-Q15ConsumerAcceptNew	9.53	.049	-0.04	.971
Q2RangeOfProNotOffered-Q16ConsumerDissatisfiedProvideFeedback	12.86	.012	1.20	.231
Q2RangeOfProNotOffered-Q17ConsumerAlwaysHasNewProducts	6.65	.155	0.01	.988
Q2RangeOfProNotOffered-Q18ConsumerAcceptionFirst	7.00	.136	0.25	.800
Q3AddNewProducts-Q4ImproveProducts	6.61	.158	-0.02	.986
Q3AddNewProducts-Q5ChangeProducts	15.08	.005	0.45	.649
Q3AddNewProducts-Q15ConsumerAcceptNew	5.59	.232	-0.55	.580
Q3AddNewProducts-Q16ConsumerDissatisfiedProvideFeedback	9.46	.051	0.51	.607
Q3AddNewProducts-Q17ConsumerAlwaysHasNewProducts	5.27	.261	-0.85	.395
Q3AddNewProducts-Q18ConsumerAcceptionFirst	6.31	.177	-0.20	.844
Q4ImproveProducts-Q5ChangeProducts	6.10	.192	-0.54	.587
Q4ImproveProducts-Q15ConsumerAcceptNew	2.77	.597	-1.36	.175
Q4ImproveProducts-Q16ConsumerDissatisfiedProvideFeedback	8.47	.076	0.04	.967
Q4ImproveProducts-Q17ConsumerAlwaysHasNewProducts	2.09	.719	-0.73	.465
Q4ImproveProducts-Q18ConsumerAcceptionFirst	6.12	.191	-0.35	.729
Q5ChangeProducts-Q15ConsumerAcceptNew	5.66	.226	-1.33	.185
Q5ChangeProducts-Q16ConsumerDissatisfiedProvideFeedback	6.75	.150	-0.77	.442
Q5ChangeProducts-Q17ConsumerAlwaysHasNewProducts	3.01	.555	-1.54	.123
Q5ChangeProducts-Q18ConsumerAcceptionFirst	5.07	.280	-0.89	.375
Q15ConsumerAcceptNew-Q16ConsumerDissatisfiedProvideFeedback	3.95	.413	-0.70	.487
Q15ConsumerAcceptNew-Q17ConsumerAlwaysHasNewProducts	1.66	.798	-1.76	.078
Q15ConsumerAcceptNew-Q18ConsumerAcceptionFirst	3.29	.510	-1.30	.193
Q16ConsumerDissatisfiedProvideFeedback-Q17ConsumerAlwaysHasNewProducts	6.87	.143	-0.58	.564
Q16ConsumerDissatisfiedProvideFeedback-Q18ConsumerAcceptionFirst	3.89	.421	-0.45	.653
Q17ConsumerAlwaysHasNewProducts-Q18ConsumerAcceptionFirst	4.95	.293	-0.77	.440

Mardia's Test Results

The result of the correlations was examined using the Holm correction to adjust for multiple comparisons based on an alpha value of .05. A significant positive correlation was observed between Q2RangeOfProNotOffered and Q3AddNewProducts, with a correlation of .55, indicating a large effect size ($p = .009$, 95.00% CI = [.28, .73]). This suggests that as Q2RangeOfProNotOffered increases, Q3AddNewProducts tends to increase. A significant positive correlation was observed between Q15ConsumerAcceptNew and Q17ConsumerAlwaysHasNewProducts, with a correlation of .52, indicating a large effect size ($p = .017$, 95.00% CI = [.25, .72]). This suggests that as Q15ConsumerAcceptNew increases, Q17ConsumerAlwaysHasNewProducts tends to increase. A significant positive correlation was observed between Q15ConsumerAcceptNew and Q18ConsumerAcceptionFirst, with a correlation of .55, indicating a large effect size ($p = .008$, 95.00% CI = [.29, .74]). This suggests that as Q15ConsumerAcceptNew increases, Q18ConsumerAcceptionFirst tends to increase. A significant positive correlation was observed between Q17ConsumerAlwaysHasNewProducts and Q18ConsumerAcceptionFirst, with a correlation of .66, indicating a large effect size ($p < .001$, 95.00% CI = [.44, .81]). This suggests that as Q17ConsumerAlwaysHasNewProducts increases, Q18ConsumerAcceptionFirst tends to increase. No other significant correlations were found. Table 6 and Table 7 present the results of the correlations.

Table 6

Pearson Correlation Matrix Among Q1LaunchProducts, Q2RangeOfProNotOffered,

Q3AddNewProducts, Q4ImproveProducts, Q5ChangeProducts,

Q15ConsumerAcceptNew, Q16ConsumerDissatisfiedProvideFeedback,

Q17ConsumerAlwaysHasNewProducts, and Q18ConsumerAcceptionFirst

Variable	1	2	3	4	5	6	7	8	9
1. Q1LaunchProducts	-								
2. Q2RangeOfProNotOffered	.15	-							
3. Q3AddNewProducts	.22	.55*	-						
4. Q4ImproveProducts	.20	.47	.35	-					
5. Q5ChangeProducts	-.11	.27	.38	.19	-				
6. Q15ConsumerAcceptNew	.31	.01	.35	.08	.13	-			
7. Q16ConsumerDissatisfiedProvideFeedback	-.08	.15	.07	.10	.23	-.16	-		
8. Q17ConsumerAlwaysHasNewProducts	.09	.31	.42	.06	.22	.52*	.05	-	
9. Q18ConsumerAcceptionFirst	.30	.21	.37	.24	.22	.55*	.06	.66*	-

Note. *p

Table 7

Pearson Correlation Results Among Q1LaunchProducts, Q2RangeOfProNotOffered,

Q3AddNewProducts, Q4ImproveProducts, Q5ChangeProducts,

Q15ConsumerAcceptNew, Q16ConsumerDissatisfiedProvideFeedback,

Q17ConsumerAlwaysHasNewProducts, and Q18ConsumerAcceptionFirst

Combination	r	95.00% CI	n	p
Q1LaunchProducts-Q2RangeOfProNotOffered	.15	[-.17, .44]	40	1.000
Q1LaunchProducts-Q3AddNewProducts	.22	[-.10, .50]	40	1.000
Q1LaunchProducts-Q4ImproveProducts	.20	[-.12, .48]	40	1.000
Q1LaunchProducts-Q5ChangeProducts	-.11	[-.41, .21]	40	1.000
Q1LaunchProducts-Q15ConsumerAcceptNew	.31	[-.00, .57]	40	1.000
Q1LaunchProducts-Q16ConsumerDissatisfiedProvideFeedback	-.08	[-.38, .24]	40	1.000
Q1LaunchProducts-Q17ConsumerAlwaysHasNewProducts	.09	[-.23, .39]	40	1.000
Q1LaunchProducts-Q18ConsumerAcceptionFirst	.30	[-.01, .56]	40	1.000
Q2RangeOfProNotOffered-Q3AddNewProducts	.55	[.28, .73]	40	.009
Q2RangeOfProNotOffered-Q4ImproveProducts	.47	[.18, .68]	40	.079
Q2RangeOfProNotOffered-Q5ChangeProducts	.27	[-.04, .54]	40	1.000
Q2RangeOfProNotOffered-Q15ConsumerAcceptNew	.01	[-.30, .32]	40	1.000
Q2RangeOfProNotOffered-Q16ConsumerDissatisfiedProvideFeedback	.15	[-.17, .44]	40	1.000
Q2RangeOfProNotOffered-Q17ConsumerAlwaysHasNewProducts	.31	[-.00, .57]	40	1.000
Q2RangeOfProNotOffered-Q18ConsumerAcceptionFirst	.21	[-.11, .49]	40	1.000
Q3AddNewProducts-Q4ImproveProducts	.35	[.05, .60]	40	.723
Q3AddNewProducts-Q5ChangeProducts	.38	[.08, .62]	40	.432
Q3AddNewProducts-Q15ConsumerAcceptNew	.35	[.05, .60]	40	.723
Q3AddNewProducts-Q16ConsumerDissatisfiedProvideFeedback	.07	[-.25, .37]	40	1.000
Q3AddNewProducts-Q17ConsumerAlwaysHasNewProducts	.42	[.13, .65]	40	.201
Q3AddNewProducts-Q18ConsumerAcceptionFirst	.37	[.07, .61]	40	.544
Q4ImproveProducts-Q5ChangeProducts	.19	[-.13, .47]	40	1.000
Q4ImproveProducts-Q15ConsumerAcceptNew	.08	[-.24, .38]	40	1.000
Q4ImproveProducts-Q16ConsumerDissatisfiedProvideFeedback	.10	[-.22, .40]	40	1.000
Q4ImproveProducts-Q17ConsumerAlwaysHasNewProducts	.06	[-.26, .36]	40	1.000
Q4ImproveProducts-Q18ConsumerAcceptionFirst	.24	[-.08, .51]	40	1.000
Q5ChangeProducts-Q15ConsumerAcceptNew	.13	[-.19, .42]	40	1.000
Q5ChangeProducts-Q16ConsumerDissatisfiedProvideFeedback	.23	[-.09, .50]	40	1.000
Q5ChangeProducts-Q17ConsumerAlwaysHasNewProducts	.22	[-.10, .50]	40	1.000
Q5ChangeProducts-Q18ConsumerAcceptionFirst	.22	[-.09, .50]	40	1.000
Q15ConsumerAcceptNew-Q16ConsumerDissatisfiedProvideFeedback	-.16	[-.45, .16]	40	1.000
Q15ConsumerAcceptNew-Q17ConsumerAlwaysHasNewProducts	.52	[.25, .72]	40	.017
Q15ConsumerAcceptNew-Q18ConsumerAcceptionFirst	.55	[.29, .74]	40	.008
Q16ConsumerDissatisfiedProvideFeedback-Q17ConsumerAlwaysHasNewProducts	.05	[-.27, .36]	40	1.000
Q16ConsumerDissatisfiedProvideFeedback-Q18ConsumerAcceptionFirst	.06	[-.26, .36]	40	1.000
Q17ConsumerAlwaysHasNewProducts-Q18ConsumerAcceptionFirst	.66	[.44, .81]	40	< .001

Note. p-values adjusted using the Holm correction.

Summary

Two research questions were analyzed and examined utilizing the IBM SPSS software. The first research question examined in the first research question of what the relationship between innovation management and organizational performance is. The first research question of there is a relationship between innovation management and organizational performance examined the hypothesis and null hypothesis of there is no relationship between management innovation and an organization's performance and the null hypothesis of there is a relationship between management innovation and an organization's performance. There was enough evidence presented that to reject the first hypothesis when an organization manages innovation, the organization's financial performance increases.

The second research question of what the relationship between innovation management and consumer acceptance is had also presented enough evidence that when an organization manages innovation, consumers are more likely to accept a new product of service. In testing the first hypothesis that is no relationship between innovation management and consumer acceptance was nullified by showing that there is a relationship between innovation management and consumer acceptance by using the bivariate correlation with Pearson method.

Finally, comments submitted by the participants were analyzed and found a couple of themes regarding what type of products or services they are easily accepting or rejecting. In their comments about both accepting and rejecting, technology products and/or services that are within the past five years were presented in both questions.

Because technology products and/or services were in both questions of acceptance and rejection, it can only be determined that the types of products and/or services of being accepted or rejected such as newer services that reduce the correspondence of a live person, or newer technology that has not been around long enough or been "proven" to society of its added value.

As the results were discussed in depth within this chapter, I transition to Chapter 5 where I interpret the findings of this study, discuss the limitations of the study, and recommend future studies. I will also discuss the social impact and implications of the study, and finally, I will provide a conclusion of the research study.

Chapter 5: Discussion, Conclusions, and Recommendations

As previously indicated, the purpose of this quantitative correlational study was to understand and interpret how organizations manage innovation and, if an organization is managing innovation, how does it relate to the organization's performance and consumer acceptance. The two research questions and their hypotheses conducted in this research study was to determine:

RQ1: What is the relationship between management innovation and an organization's performance?

$H_0 1$: There is no relationship between management innovation and an organization's performance.

$H_a 1$: There is a relationship between management innovation and an organization's performance.

RQ2: What is the relationship between innovation management and consumer acceptance?

$H_0 1$: There is no relationship between innovation management and consumer acceptance.

$H_a 1$: There is a relationship between innovation management and consumer acceptance.

This chapter contains a review of each of the research questions and their hypotheses in detail and compares them with the literature review discussed in Chapter 2. The interpretations of findings, limitations of the study, recommendations, implications, and finally, the conclusion is discussed.

Interpretation of Findings

I used the bivariate correlation with the Pearson coefficient analysis to determine if there was a relationship between innovation management and consumer acceptance, and innovation management with an organization's performance. My presentation of both included statistical results where testing assumptions to find the results within the participant data submitted. Below are the three variables used in this research study and an interpretation of the findings for each variable.

Innovation Management

In this research study, it was found that there is a significance in consumer acceptance when innovation is managed. As mentioned in Chapter 2 during the literature review, Nambison et al. (2017) explained that as technologies change, which essentially changes organizations, innovation management should be researched to incorporate concepts that reflect and capture the ways in which technologies are changing. Most participants show that consumers are willing to accept innovative products or services that are IT related.

Managing innovation within an organization, whether it be a product, service, or even a process, needs to have a life cycle. When an organization spots an opportunity for innovation, it is a way to solve a problem for a consumer; internally or externally (Molloy, 2019). Knowing the type of innovation for an organization would be helpful in what is being accepted by a consumer. As stated in Chapter 2, there are several types of innovation: organizational, social, product, open, and disruptive innovations to name a

few. Other variables tested against the innovation management were not significant enough to be able to interpret within each other positively or negatively.

Organizational Performance

Organizational performance was defined earlier as the ability to achieve the goals and objectives that an organization sets either quarterly, annually, or in their mission statement. An organization's performance is usually measured by the success of profits and the return on assets, equity, sales, and investments (Rahman et al., 2018). Performance of an organization is a key performance measurement of its outcome and, although innovation may be risky, innovation generally has a positive outcome for an organization's performance (Walker et al., 2015).

The method Furr and Dyer (2014) found that was successful in adapting innovation within an organization were to follow the steps of: (a) insight, (b) problem, (c) solution, (d) business model, and (d) scale it (p. 19). Furr and Dyer also found that, for publicly traded companies that adopted innovation elements, within 3–5 years of adoption, their innovation premium scores rose over 57% (p. 21).

In this research study, it was found that when innovation is managed, there is a significance in organizational performance. As discussed in Chapter 2, Ross and Beath (2002) provide an IT framework (see Figure 1), showing that when improving a process, it equals a long-term growth. This research study did not focus on long-term growth of an organization, so I cannot confirm that statement. Further research into this statement will be discussed in the limitations of this research study below.

When comparing the organizational performance variables to innovation management and consumer acceptance, several factors were noticed that when newer products or services were added to the organizations, the organization performance from the previous 12 months and 60 months variables were increased significantly. Other variables tested against the organizational performance were not significant enough to be able to interpret within each other positively or negatively.

Consumer Acceptance

Innovators are people who are open-minded and will freely try new products or services immediately (Halton, 2021). Laggards are those on the opposite side of an innovator. They are skeptical and conservative towards any new innovations (Ruokamo et al., 2023).

Analysis of preliminary data for each research question that was used as a consumer acceptance variable showed that several participants are not innovators, but lean towards the early majority, whereas several others are either a late majority or laggard if characterized using the innovation diffusion theory. When putting the statistical analysis and using the bivariate correlation to innovation management and consumer acceptance, the data show that when an organization manages innovation, consumers are more likely to accept the IT innovative product or service rather than reject it.

Three major correlations stood out for the consumer acceptance variable. When an organization launches a new product or service, the consumer is significantly most likely to accept the new product. Depending on the range of the product or service that is offered, the consumers may not always accept the newer version of the product or service

if there is little to no difference from the previous version of the product or service. Finally, the consumer who identified with always having the newest products or using the newest services will be the consumer to typically accept newer products or services that have launched within the previous 12 months. Other variables tested against the consumer acceptance were not significant enough to be able to interpret within each other positively or negatively.

Limitations of the Study

The potential limitations that were presented in Chapter 1 were identified in the design of the geographic area of the study and the self-reported use from the participants, participation rate, and the biases of the researcher. The effect of these limitations was reduced during the study as they were identified prior to the start of the study, and I included ways to reduce the impact of these limitations. In this section, I will describe how each limitation was reduced by the researcher.

The first limitation identified was the geographic area of the participants in the study. Only participants who were in the United States were selected, and the study relied on participants' self-reported use. The self-reported use when considering the technology acceptance model was identified and was reduced by having two questions at the end of the survey by allowing the participant to write as much or as little as they desired in what technologies they easily accept or reject.

The participation rate was a limitation concern for the research prior to conducting the survey; however, the minimum participation rate was met with 40 respondents and is no longer identified as a limitation to this study. The final limitation

that was identified in this study was the personal bias of the researcher. My being in the IT field in several different types of industries that have managed innovation at an organizational level could have influenced the results. Reviewing the results and using the Likert scale minimized my personal bias in the surveyed results. When analyzing the results for Questions 19 and 20, my judgments to the participants' responses were minimal to the furthest extent possible.

Recommendations

Additional research could be conducted to replicate this study in different circumstances such as surveying a larger population and the study could be conducted outside of the United States. Innovation is everywhere including third world countries; the developments of innovation vary across the world making the types of innovations accepting where other countries may reject them. Further research on why a consumer may reject innovative innovations would be helpful to organizations when developing new products or services.

Gathering additional data from the participants such as age, gender, and income data would have been helpful in determining whether specific age groups or genders are innovators or laggards within this study. This information was originally going to be collected; however, the IRB decided that this information was not necessary and should not be collected.

Initially, there were to be three rounds of the survey. The first round was to gather data and find a theme among participants on what type of consumer they were: innovator, early adopters, early majority, late majority, or laggards. Research to help determine what

makes each consumer decide why they are either would be useful also to organizations and how to help those who may be late majority or laggards to adopt innovative products or services. This would be recommended to research to help find what makes an early adopter be pushed into the next category of an innovator. By having additional rounds of surveys, emerging categories and having similar questions that evolve around each category of consumer could be a positive social impact for a consumer with the resistance or acceptance of innovation.

Implications

The potential impact of this study for positive social change is for organizations on when to invest in innovative products and services. Knowing that consumers will accept subscriptions and services that are easy to use versus a service that is difficult to use can help determine when an organization should invest time and money on that specific service. Other potential positive social change impacts from this study would include products that have several changes and not just a "newer version" of something that is already being used.

Subscription Services Using Technology

Several participants stated that they easily accept subscription services that are easy to use on their smart phones. This suggests that the technology acceptance model's two variables are true where the perceived usefulness and perceived ease of use (Lee et al., 2003) are true. Participants stated that applications such as delivery food services, easy to use with little to no effort, or those with a trial and/or discount period are easily accepted and adopted by innovators.

The perceived usefulness and perceived ease of use where software applications that are not easy to use or cause frustration to consumers will not be adopted and further pushed away by laggards and even innovators. An example of older seniors not accepting mobile banking services as the older generations preferred using a bank teller for their banking needs (Jeong & Yoon, 2013) was included in the literature review section in Chapter 2.

Newer Versions of Products

Participants stated that a newer version of a product is usually not acceptable or worth the cost in upgrading the product. A specific example that was given in the comments by a participant was a product that takes significant time investment before using. Although specific examples of what products participants may have been referring to would have been helpful, the overall theme found was that too many new products being upgraded or updated soon after its original release were not accepted.

Participants rejecting newer versions of products was also noteworthy when participants answered what innovations they will typically reject. Newer versions of products were defined as a product that has been available for less than 3 years. Although the research of this study did not go into newer versions of services, it may be beneficial to determine whether newer innovative services are easily rejected too.

Conclusions

The objective of this research study was to determine whether there is a correlation between innovation management and consumer acceptance, and innovation management and organizational performance. The literature examined the different types

of innovation and innovation management styles, the types of consumers and which type is most likely to accept or reject innovative products or service such as the innovators and laggards. Most organizations have a goal to be innovative and do not understand how to define innovation (McGowan, 2016). Business managers pursue ways to improve profits and efficiency by integrating innovations without preparation and information, which will eventually affect productivity and revenue (Kim & Min, 2015).

Two research questions were analyzed and examined utilizing the IBM SPSS software. The first research question examined what the relationship between innovation management and organizational performance is, with the hypothesis of there is no relationship between management innovation and an organization's performance and the null hypothesis of there is a relationship between management innovation and an organization's performance. There was enough evidence presented to reject the first hypothesis when an organization manages innovation, the organization's financial performance increases. The second research question of what the relationship between innovation management and consumer acceptance is had also presented enough evidence that when an organization manages innovation, consumers are more likely to accept a new product of service. In testing the first hypothesis that is no relationship between innovation management and consumer acceptance was nullified by showing that there is a relationship between innovation management and consumer acceptance by using the bivariate correlation with Pearson method.

Organizations can be more profitable by providing a range of products and having a plan to provide innovative products and/or services and testing against consumer

acceptance criteria and managing the innovation. Organizations have financial goals and when a consumer accepts an innovative idea, product, or service, the organization can either be a disruptor in the industry or go out of business. This research study started with the quote from Steve Wozniak and has demonstrated that his words are true: "True Innovation is one that improves people's lives."

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Appendix A: Permission to Conduct Research Using SurveyMonkey

Momentive Inc. www.momentive.ai

For questions, visit our Help Center
help.surveymonkey.com

Re: Permission to Conduct Research Using SurveyMonkey

To Whom It May Concern:

This letter is being produced in response to a request by a student at your institution who wishes to conduct a survey using SurveyMonkey in order to support their research. The student has indicated that they require a letter from Momentive granting them permission to do this. Please accept this letter as evidence of such permission. Students are permitted to conduct research via the SurveyMonkey platform provided that they abide by our Terms of Use at https://www.surveymonkey.com/mp/legal/terms-of-use/.

Our SurveyMonkey product/tool is a self-serve survey platform on which our users can, by themselves, create, deploy and analyze surveys through an online interface. We have users in many different industries who use surveys for many different purposes. One of our most common use cases is students and other types of researchers using our online tools to conduct academic research.

If you have any questions about this letter, please contact us through our Help

Center at help.surveymonkey.com. Sincerely,

Momentive Inc.

Appendix B: Permission to Use Survey Questions from Dr. Jenny Darroch

Re: Permission to Use Questions for Dissertation

JD Jenny Darroch <jennydarroch@gmail.com>
To Sean Edgeington

↩ Reply   ↩ Reply All   → Forward   ···

Sat 8/13/2022 6:30 PM

ⓘ You replied to this message on 8/14/2022 7:00 PM.

Absolutely! Feel free to use them and good luck with your research
Jenny Darroch

On Sat, Aug 13, 2022 at 6:14 PM Sean Edgeington <sean.edgeington@waldenu.edu> wrote:

Hello Dr. Jenny Darroch,

I am a doctoral student at Walden University completing a dissertation in Innovation Management, Firm Performance, and Consumer Acceptance. I am writing to ask written permission to use your questions from your article "Knowledge management, innovation and firm performance" published in the Journal of Knowledge Management in June of 2005 in my research study. As I read through your article, I found that the majority of your results match the area of my research dissertation, and would like to use your questions specifically in Table I "Correlations of knowledge management scales with innovation types" and Table III "Correlation of knowledge management scales with performance types."

My research is being supervised by my committee chair, Dr. Karina Kasztelnik. If these are acceptable terms and conditions, please indicate so by replying to me through e-mail at sean.edgeington@waldenu.edu.

Sincerely,

Sean Edgeington

+1.602.909.8844

Appendix C: Survey Questions

For questions 1 – 18, please provide a response of: *Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree.*

1. We have launched products that are the first of their kind in the world.

2. We often introduce new ranges of products or services not previously offered by this company.

3. We often add new products or services to our existing ranges.

4. We often improve or revise existing products or services.

5. We often change our products or services in order to reduce costs.

6. We often reposition existing products or services.

7. Compared with the industry average, we are more profitable.

8. Compared with the industry average, we have a greater market share.

9. Compared with the industry average, we are growing more rapidly.

10. In general, our organization is performing better than it did 12 months ago.

11. In general, our organization is performing better than it did five years ago.

12. Over the past 12 months, our organization has met its performance objectives.

13. Over the past five years, our organization has met its performance objectives.

14. As a consumer, I frequently purchase new products by the first month of its release.

15. As a consumer, I am immediate to accept new products or services never been used before.

16. As a consumer, if I am dissatisfied with a new product or service, I provide feedback to the company of my dissatisfaction.

17. Compared to my friends and colleagues, I always have the newest products.

18. Compared to my friends and colleagues, I am the first to accept products or services offered by companies.

19. For this question, please type as much or as little as you would like. What are typical products or services that you easily accept?

20. For this question, please type as much or as little as you would like. What are typical products or services that you struggle on using?

Appendix D: Survey Responses

Figure D1

Question 1 Analysis

Q1 We have launched products that are the first of their kind

Answered: 40   Skipped: 0
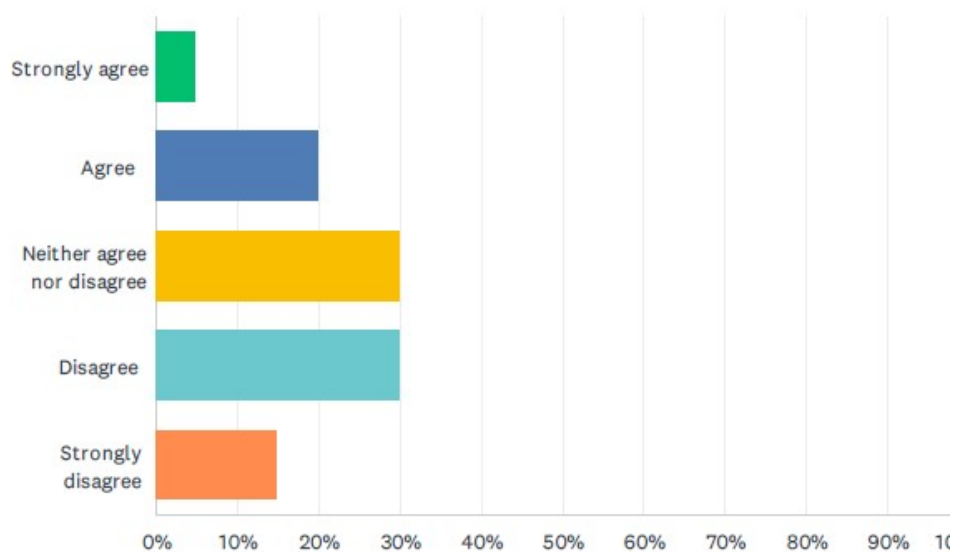
ANSWER CHOICES	RESPONSES
Strongly agree	5.00%
Agree	20.00%

Figure D2

Question 2 Analysis

Q2 We often introduce new ranges of products or services n
offered by this company.

Answered: 40   Skipped: 0
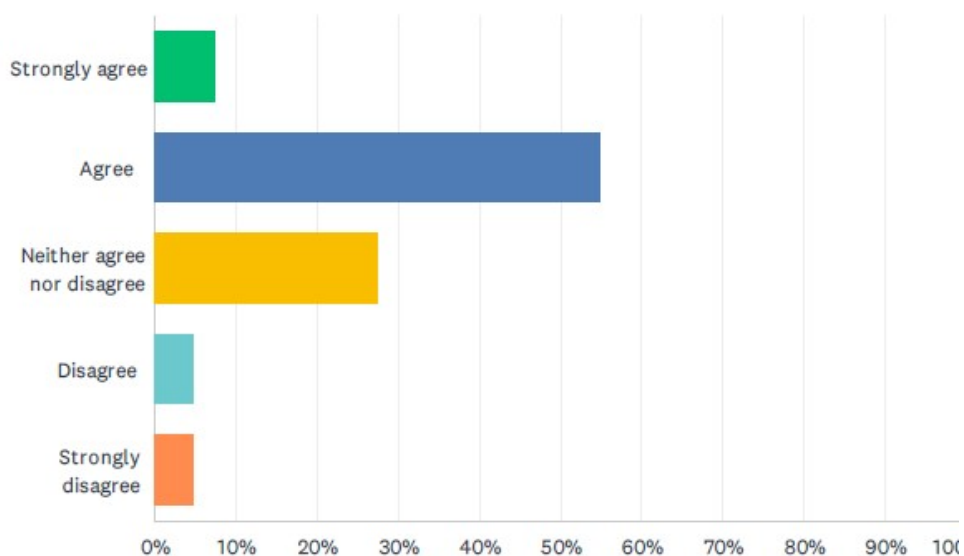
ANSWER CHOICES	RESPONSES
Strongly agree	7.50%
Agree	55.00%

Figure D3

Question 3 Analysis

Q3 We often add new products or services to our existin

Answered: 40   Skipped: 0
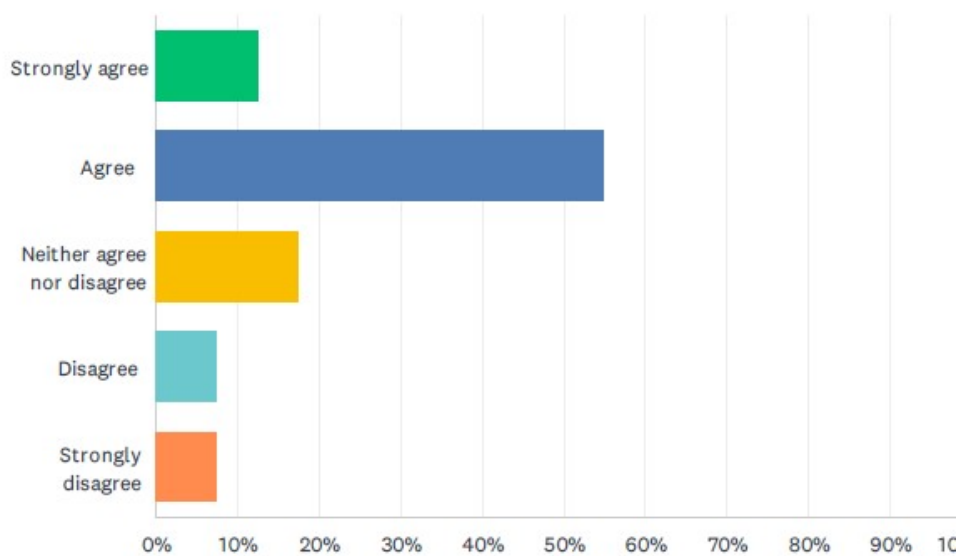
ANSWER CHOICES	RESPONSES
Strongly agree	12.50%
Agree	55.00%

Figure D4

Question 4 Analysis

Q4 We often improve or revise existing products or se

Answered: 40   Skipped: 0
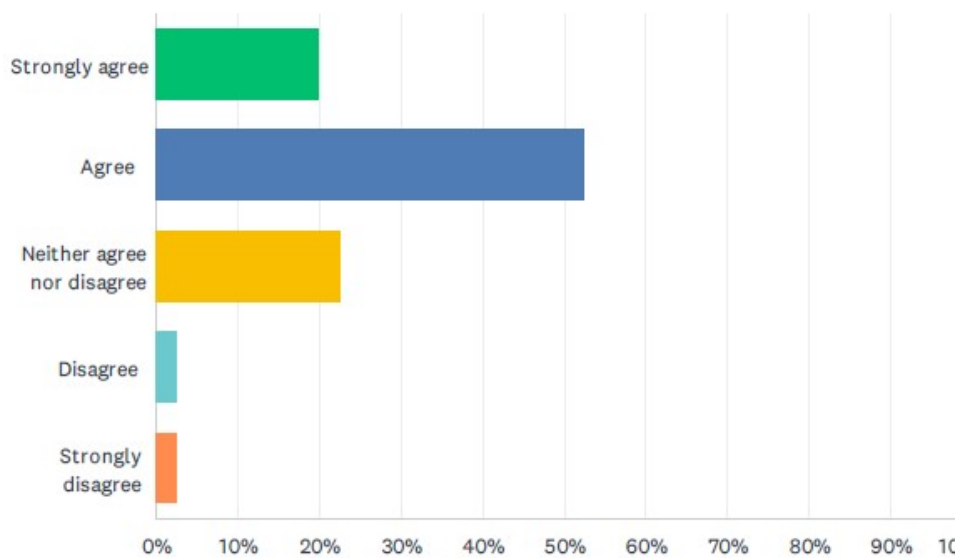
ANSWER CHOICES	RESPONSES
Strongly agree	20.00%
Agree	52.50%

Figure D5

Question 5 Analysis

Q5 We often change our products or services in order to red

Answered: 40   Skipped: 0
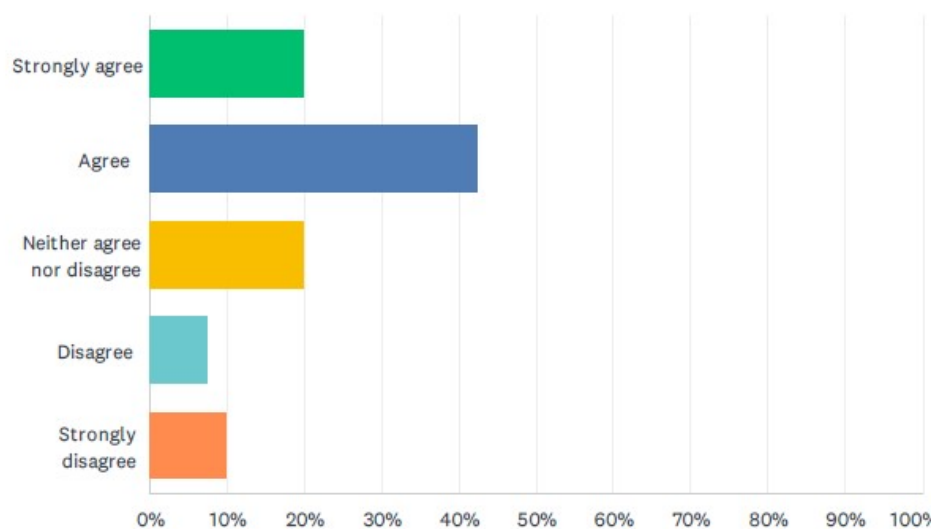
ANSWER CHOICES	RESPONSES
Strongly agree	20.00%
Agree	42.50%

Figure D6

Question 6 Analysis

Q6 We often reposition existing products or service

Answered: 40   Skipped: 0
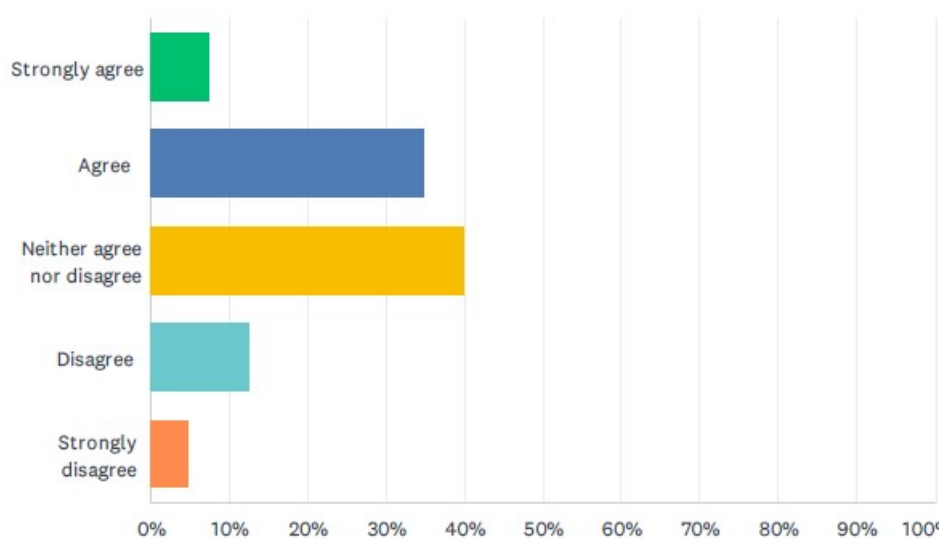
ANSWER CHOICES	RESPONSES
Strongly agree	7.50%
Agree	35.00%

Figure D7

Question 7 Analysis

Q7 Compared with the industry average, we are more pr

Answered: 40   Skipped: 0
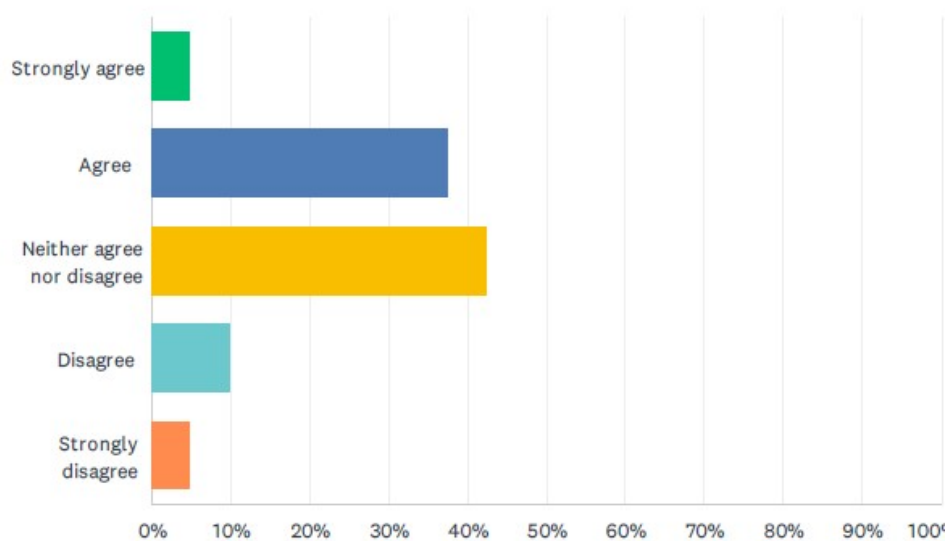
ANSWER CHOICES	RESPONSES
Strongly agree	5.00%
Agree	37.50%

Figure D8

Question 8 Analysis

Q8 Compared with the industry average, we have a greater n

Answered: 40   Skipped: 0
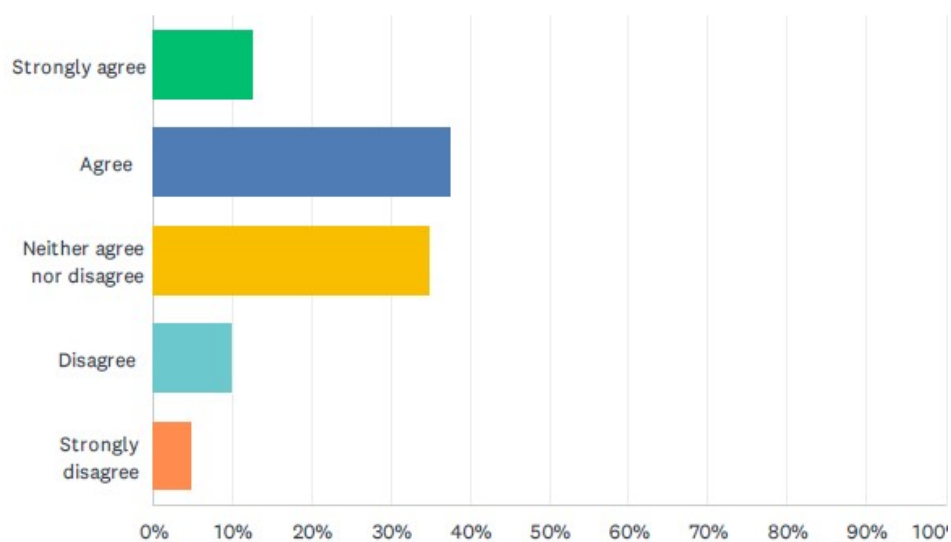
ANSWER CHOICES	RESPONSES
Strongly agree	12.50%
Agree	37.50%

Figure D9

Question 9 Analysis

Q9 Compared with the industry average, we are growing m

Answered: 40   Skipped: 0
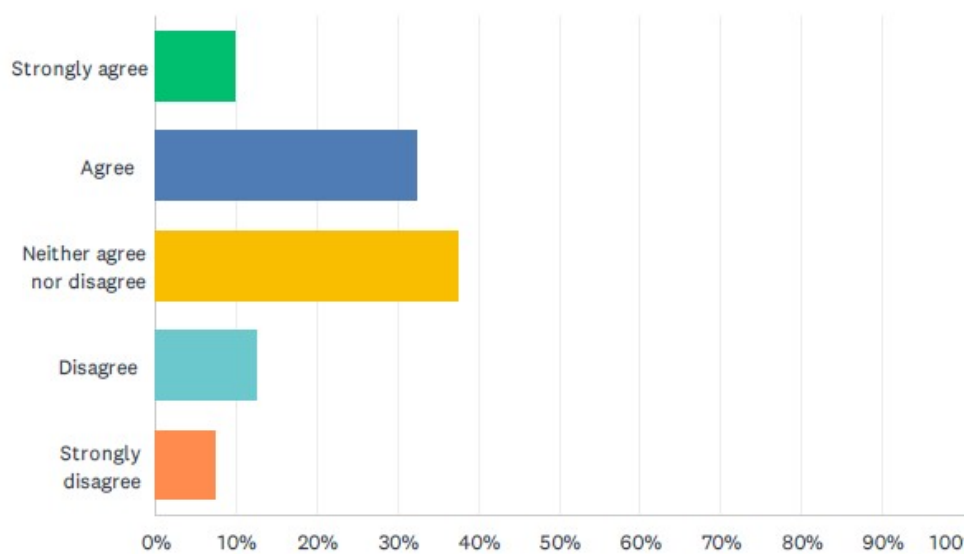
ANSWER CHOICES	RESPONSES
Strongly agree	10.00%
Agree	32.50%

Figure D10

Question 10 Analysis

Q10 In general, our organization is performing better than it d
ago.

Answered: 40   Skipped: 0
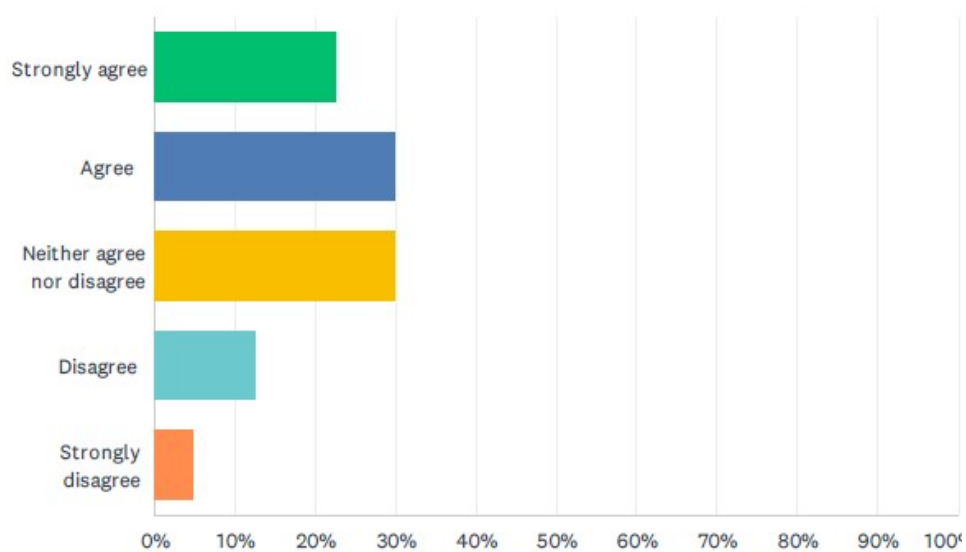
ANSWER CHOICES	RESPONSES
Strongly agree	22.50%
Agree	30.00%

Figure D11

Question 11 Analysis

Q11 In general, our organization is performing better than it di
ago.

Answered: 40   Skipped: 0
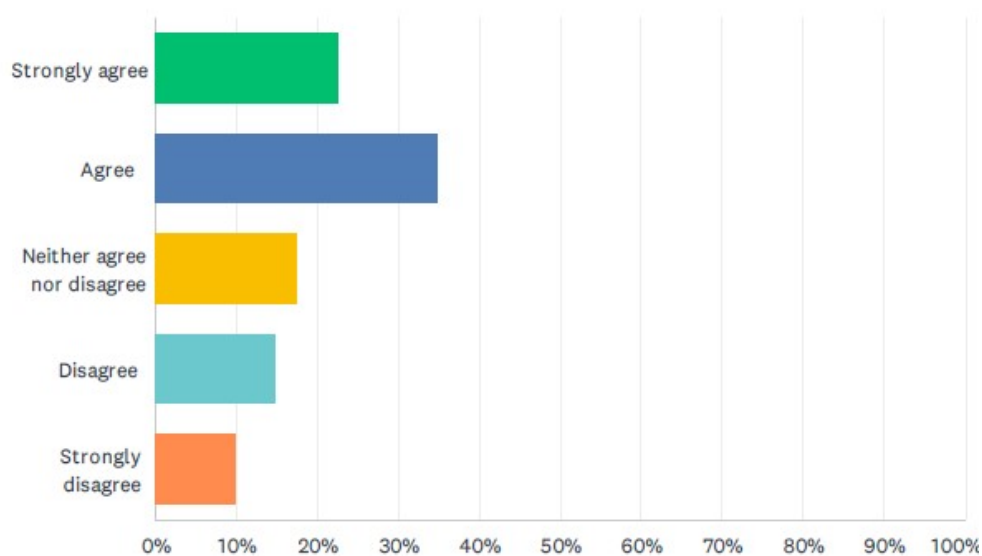
ANSWER CHOICES	RESPONSES
Strongly agree	22.50%
Agree	35.00%

Figure D12

Question 12 Analysis

Q12 Over the past 12 months, our organization has met its p
objectives.

Answered: 40   Skipped: 0
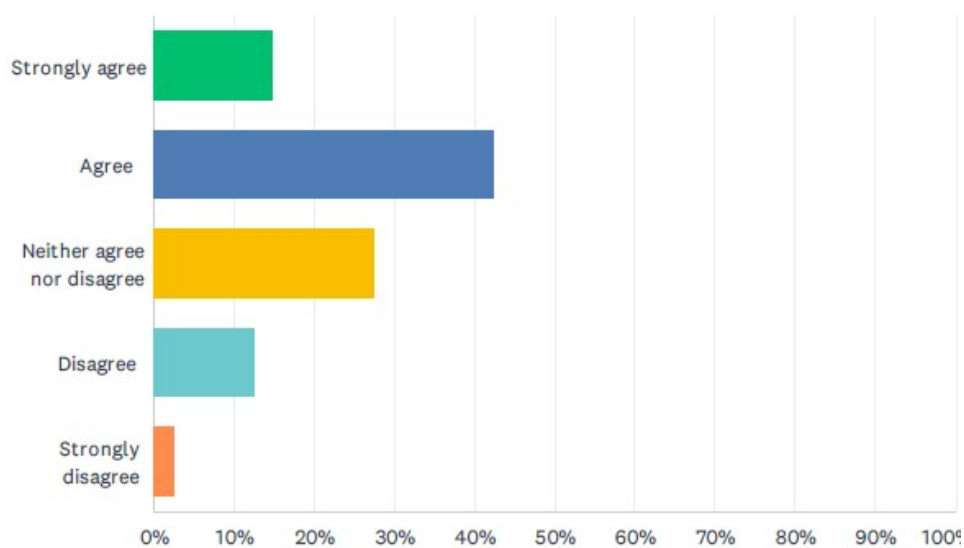
ANSWER CHOICES	RESPONSES
Strongly agree	15.00%
Agree	42.50%

Figure D13

Question 13 Analysis

Q13 Over the past five years, our organization has met its p
objectives.

Answered: 40   Skipped: 0
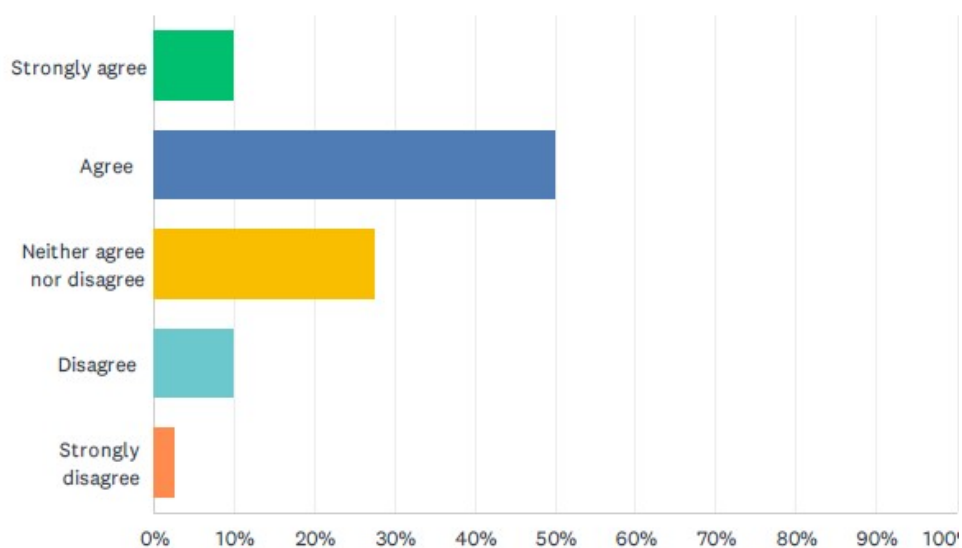
ANSWER CHOICES	RESPONSES
Strongly agree	10.00%
Agree	50.00%

Figure D14

Question 14 Analysis

Q14 As a consumer, I frequently purchase new products by th
of its release.

Answered: 40   Skipped: 0
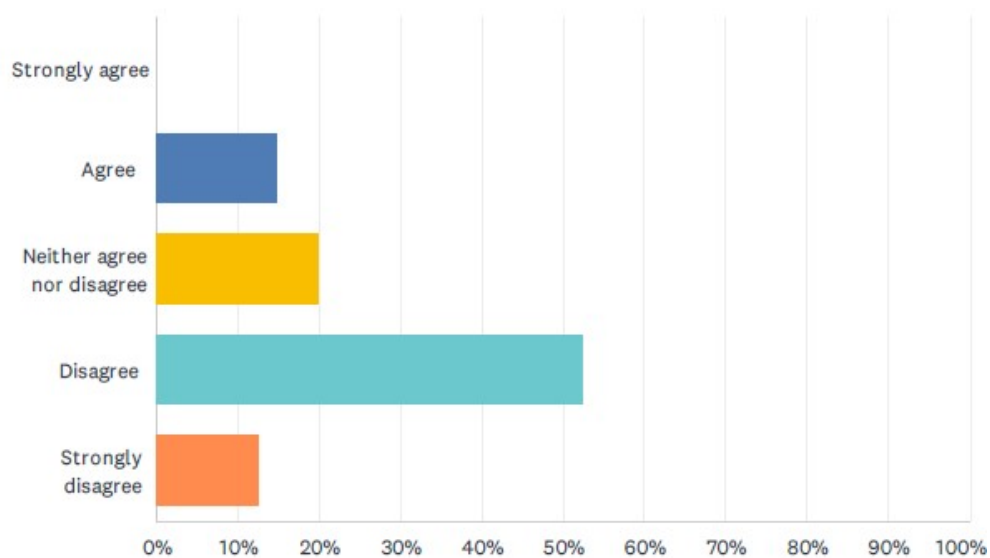
ANSWER CHOICES	RESPONSES
Strongly agree	0.00%
Agree	15.00%

Figure D15

Question 15 Analysis

Q15 As a consumer, I am immediate to accept new products
never been used before.

Answered: 40   Skipped: 0
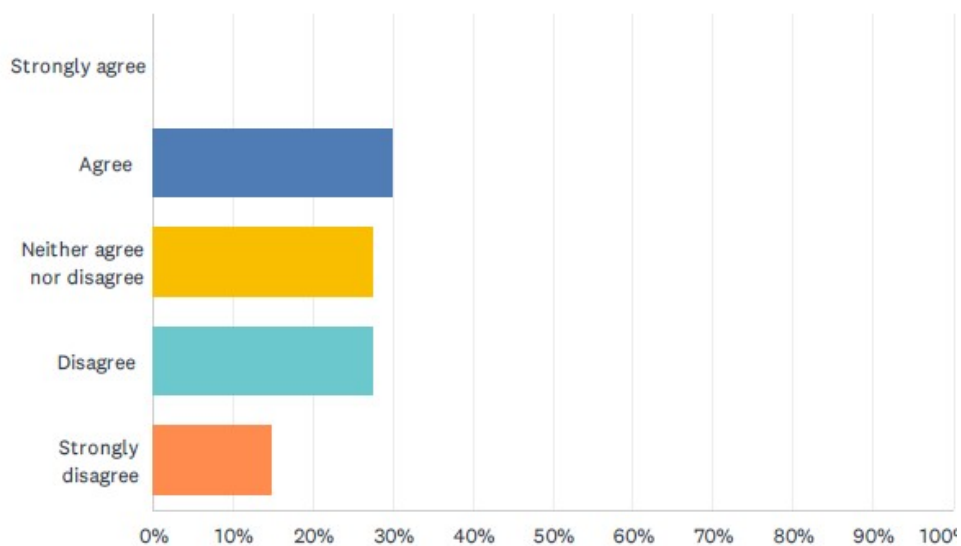
ANSWER CHOICES	RESPONSES
Strongly agree	0.00%
Agree	30.00%

Figure D16

Question 16 Analysis

Q16 As a consumer, if I am dissatisfied with a new product c
provide feedback to the company of my dissatisfacti

Answered: 40   Skipped: 0
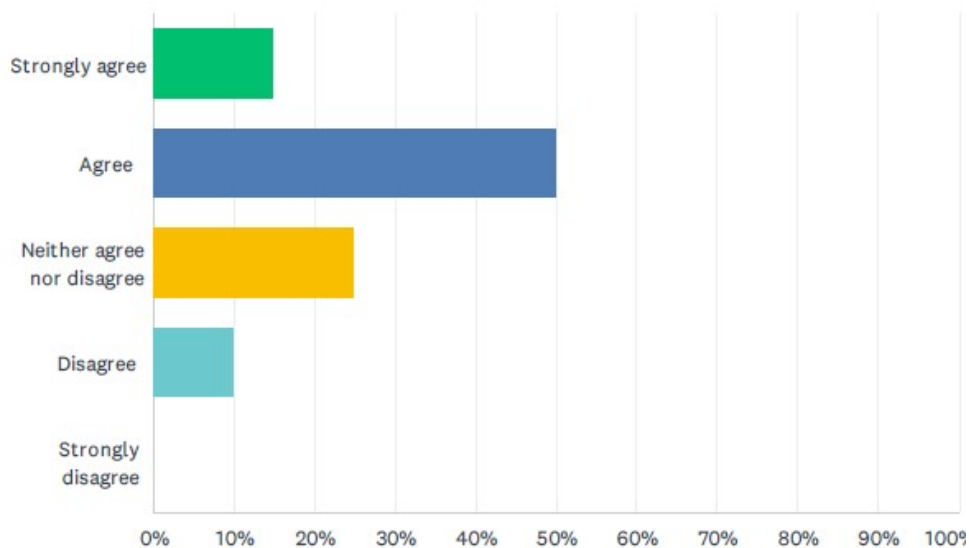
ANSWER CHOICES	RESPONSES
Strongly agree	15.00%
Agree	50.00%

Figure D17

Question 17 Analysis

Q17 Compared to my friends and colleagues, I always have products.

Answered: 40   Skipped: 0
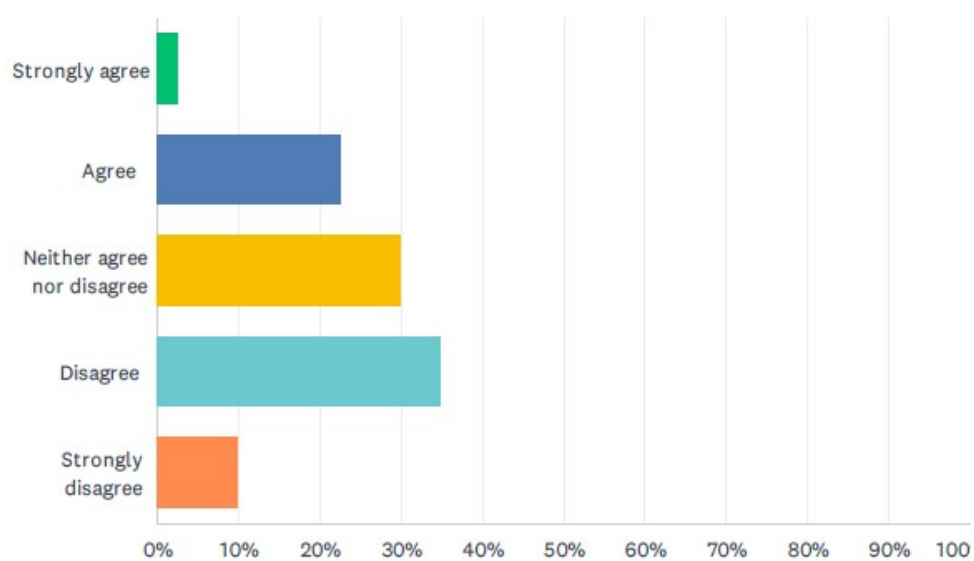
ANSWER CHOICES	RESPONSES
Strongly agree	2.50%
Agree	22.50%

Figure D18

Question 18 Analysis

Q18 Compared to my friends and colleagues, I am the first
products or services offered by companies.

Answered: 40   Skipped: 0
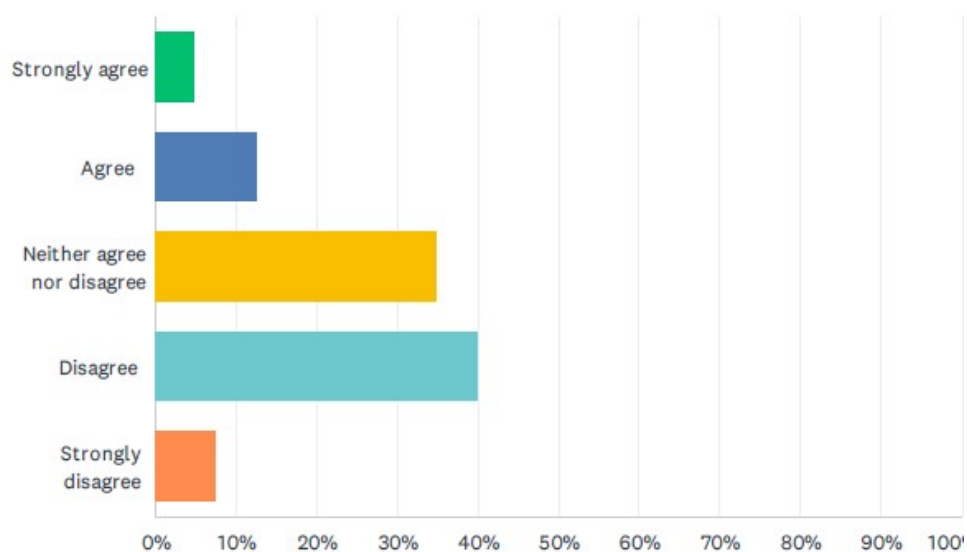
ANSWER CHOICES	RESPONSES
Strongly agree	5.00%
Agree	12.50%

Appendix E: Data Analysis (Figures)

Figure E1

Scatterplots With the Regression Line Added for Q1LaunchProducts and

Q2RangeOfProNotOffered (Top Left), Q1LaunchProducts and Q3AddNewProducts (Top

Right), Q1LaunchProducts and Q4ImproveProducts (Bottom Left), Q1LaunchProducts

and Q5ChangeProducts (Bottom Right)
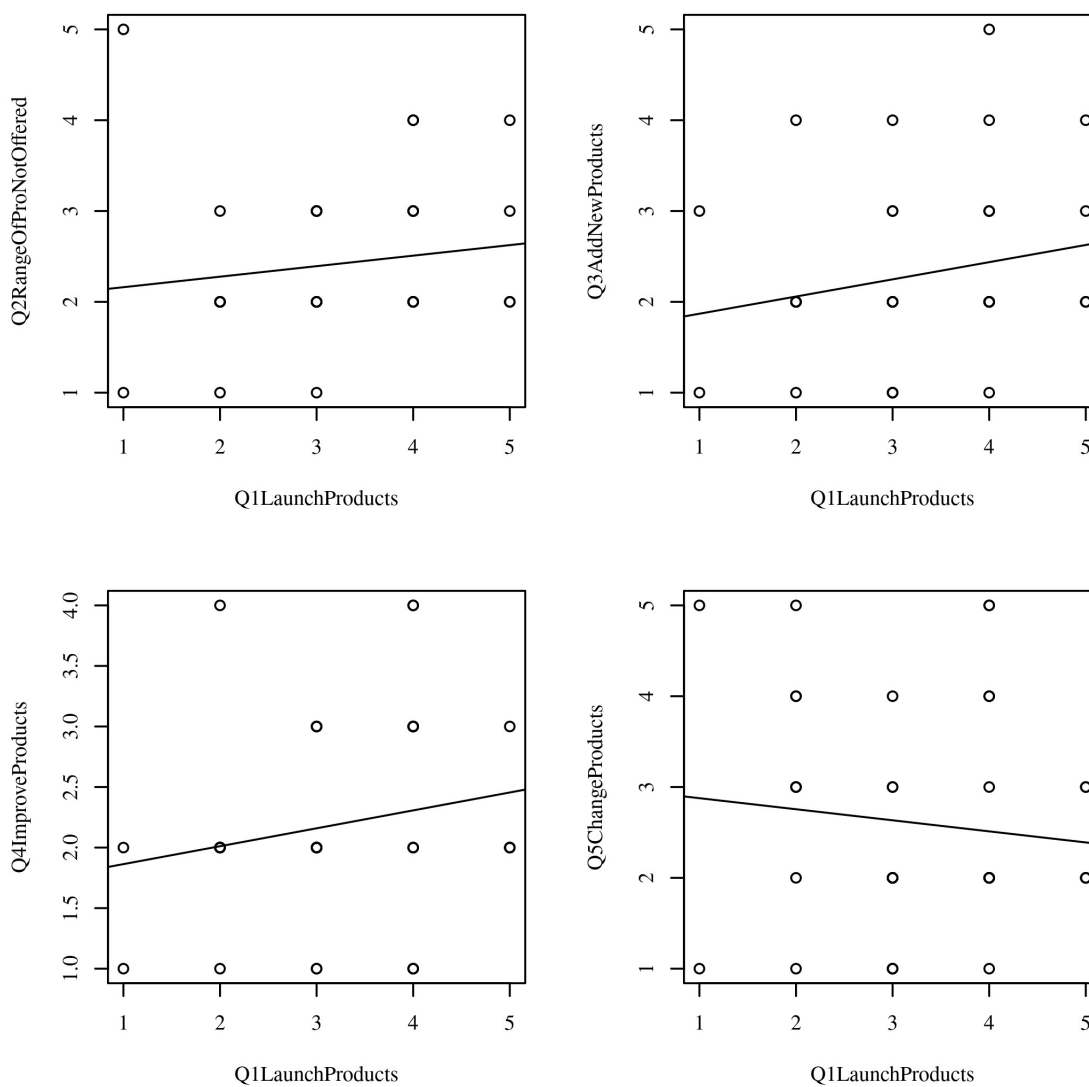
Figure E2

Scatterplots with the regression line added for Q1LaunchProducts and Q6Reposition (top left), Q1LaunchProducts and Q7Profitable (top right), Q1LaunchProducts and Q8MoreMarketShare (bottom left), Q1LaunchProducts and Q9RapidGrowth (bottom right)
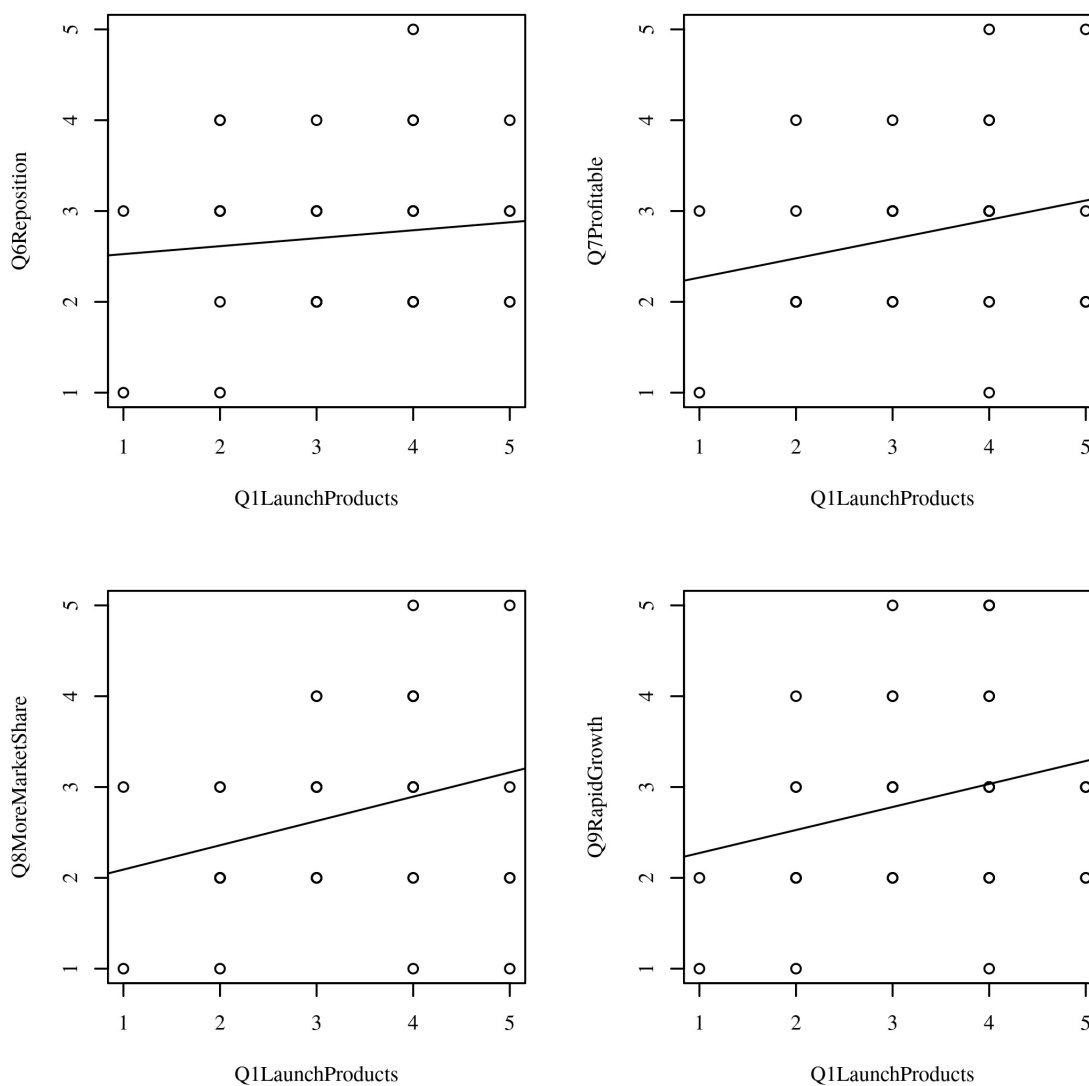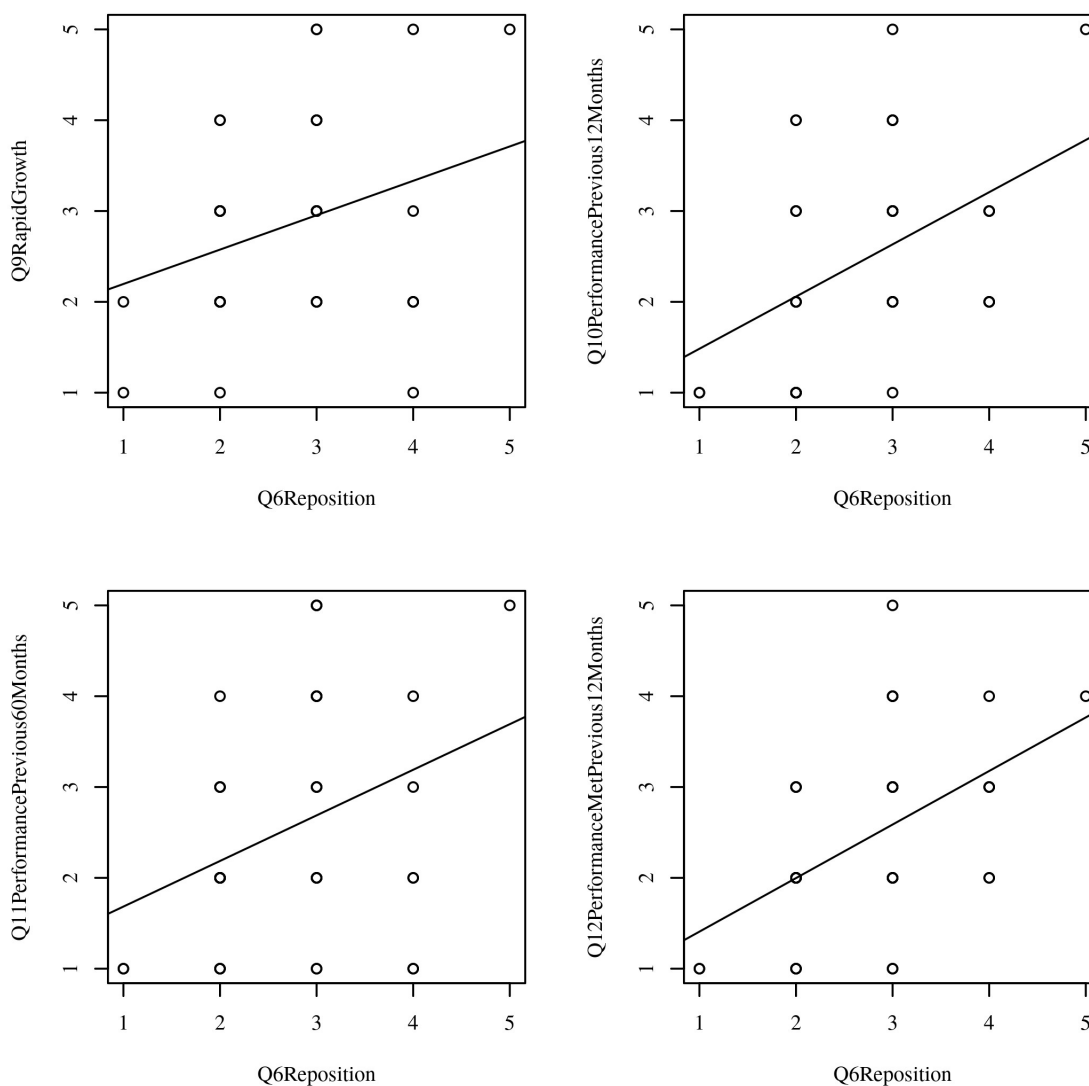
Figure E3

Scatterplots with the regression line added for Q1LaunchProducts and

Q10PerformancePrevious12Months (top left), Q1LaunchProducts and

Q11PerformancePrevious60Months (top right), Scatterplots with the regression line

added for Q1LaunchProducts and Q12PerformanceMetPrevious12Months (bottom left),

Q1LaunchProducts and Q13PerformanceMetPrevious60Months (bottom right)
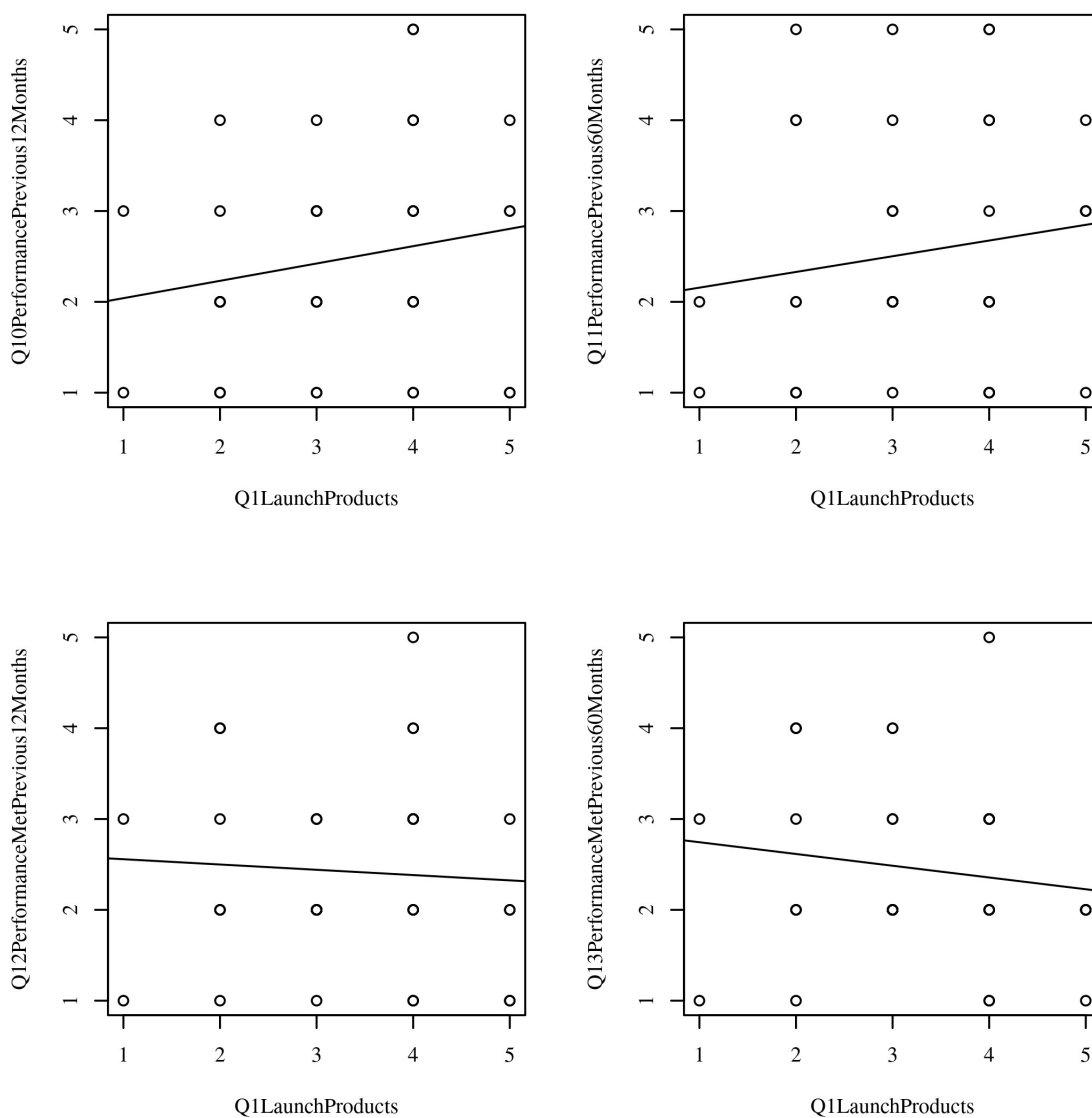
Figure E4

*Q2RangeOfProNotOffered and Q3AddNewProducts (top left), Q2RangeOfProNotOffered
and Q4ImproveProducts (top right), Scatterplots with the regression line added for
Q2RangeOfProNotOffered and Q5ChangeProducts (bottom left),
Q2RangeOfProNotOffered and Q6Reposition (bottom right)*

134
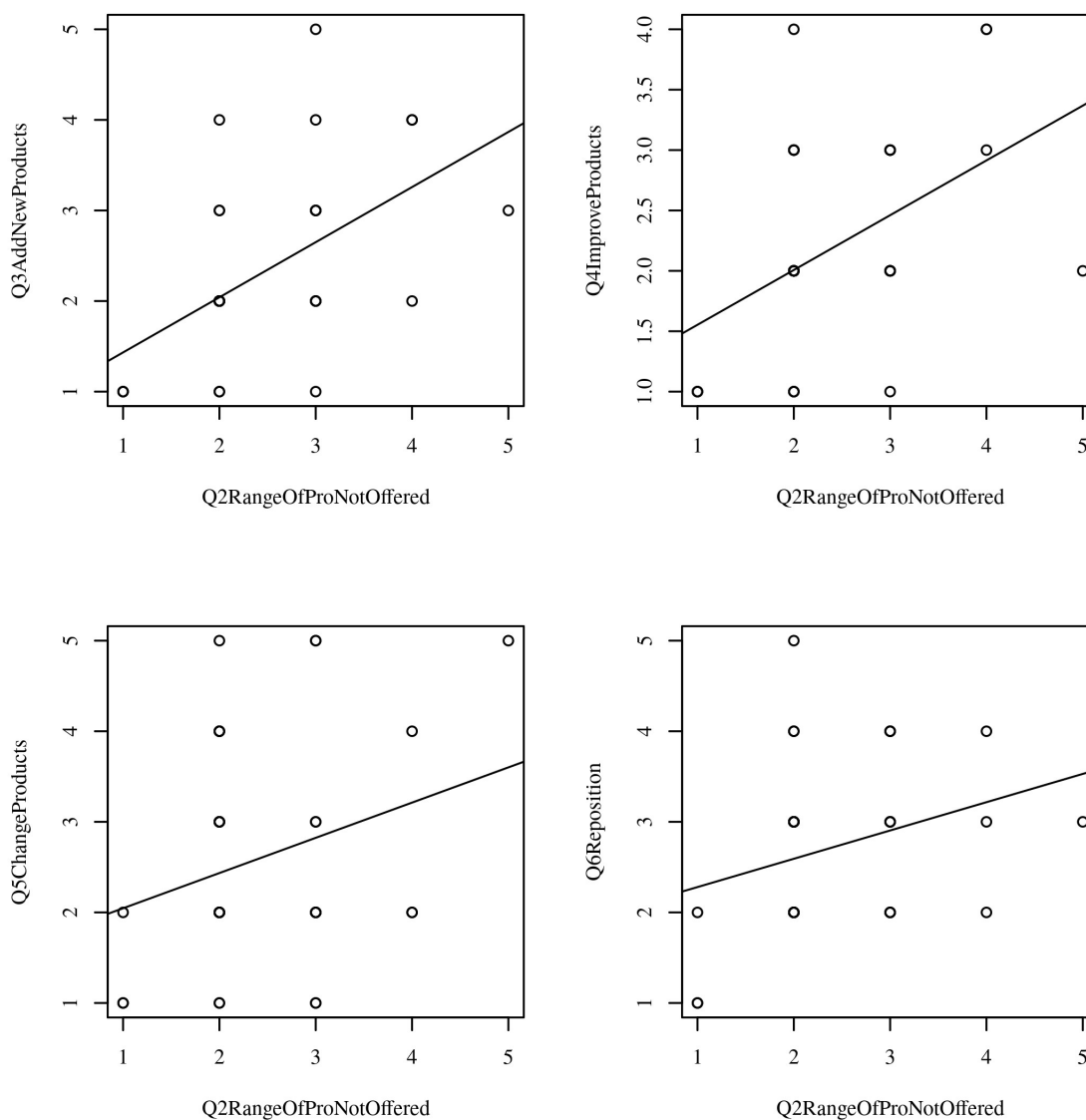
Figure E5

Scatterplots with the regression line added for Q2RangeOfProNotOffered and

Q7Profitable (top left), Q2RangeOfProNotOffered and Q8MoreMarketShare (top right),

Q2RangeOfProNotOffered and Q9RapidGrowth (bottom left), Q2RangeOfProNotOffered

and Q10PerformancePrevious12Months (bottom right)
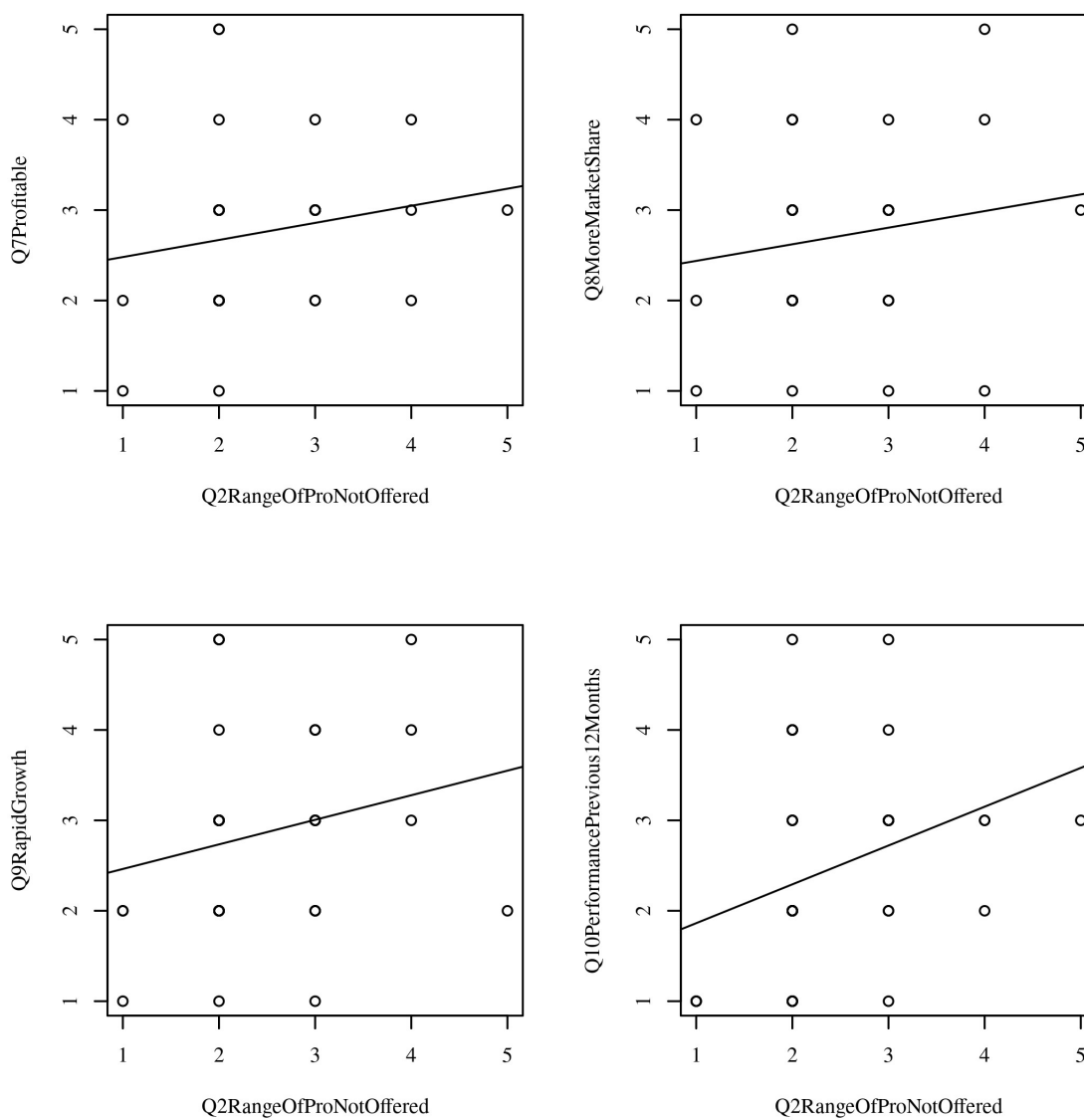
Figure E6

Scatterplots with the regression line added for Q2RangeOfProNotOffered and

Q11PerformancePrevious60Months (top left), Q2RangeOfProNotOffered and

Q12PerformanceMetPrevious12Months (top right), Q2RangeOfProNotOffered and

Q13PerformanceMetPrevious60Months (bottom left), Q3AddNewProducts and

Q4ImproveProducts (bottom right)
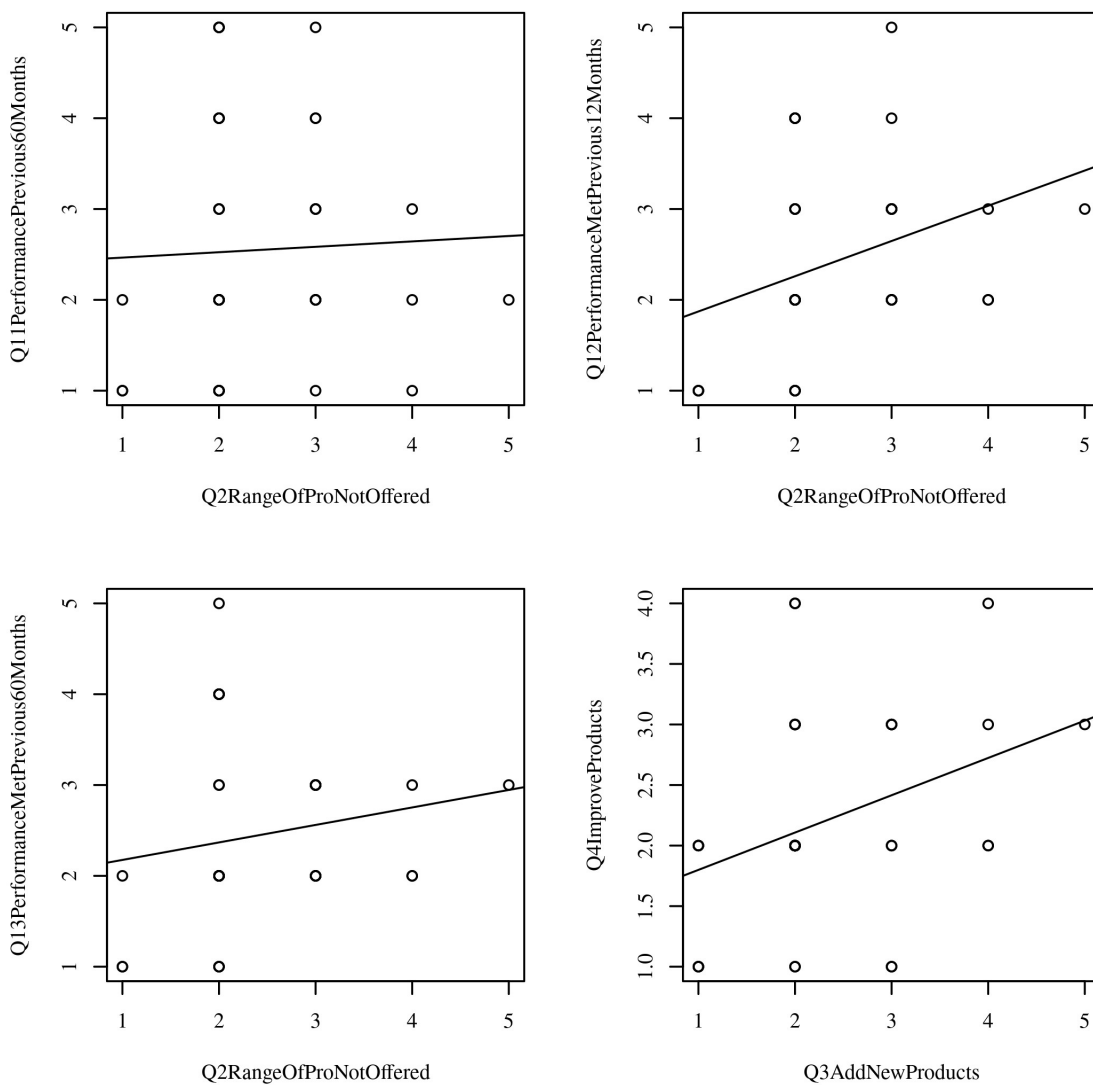
Figure E7

Scatterplots with the regression line added for Q3AddNewProducts and

Q5ChangeProducts (top left), Q3AddNewProducts and Q6Reposition (top right),

Q3AddNewProducts and Q7Profitable (bottom left), Q3AddNewProducts and

Q8MoreMarketShare (bottom right)
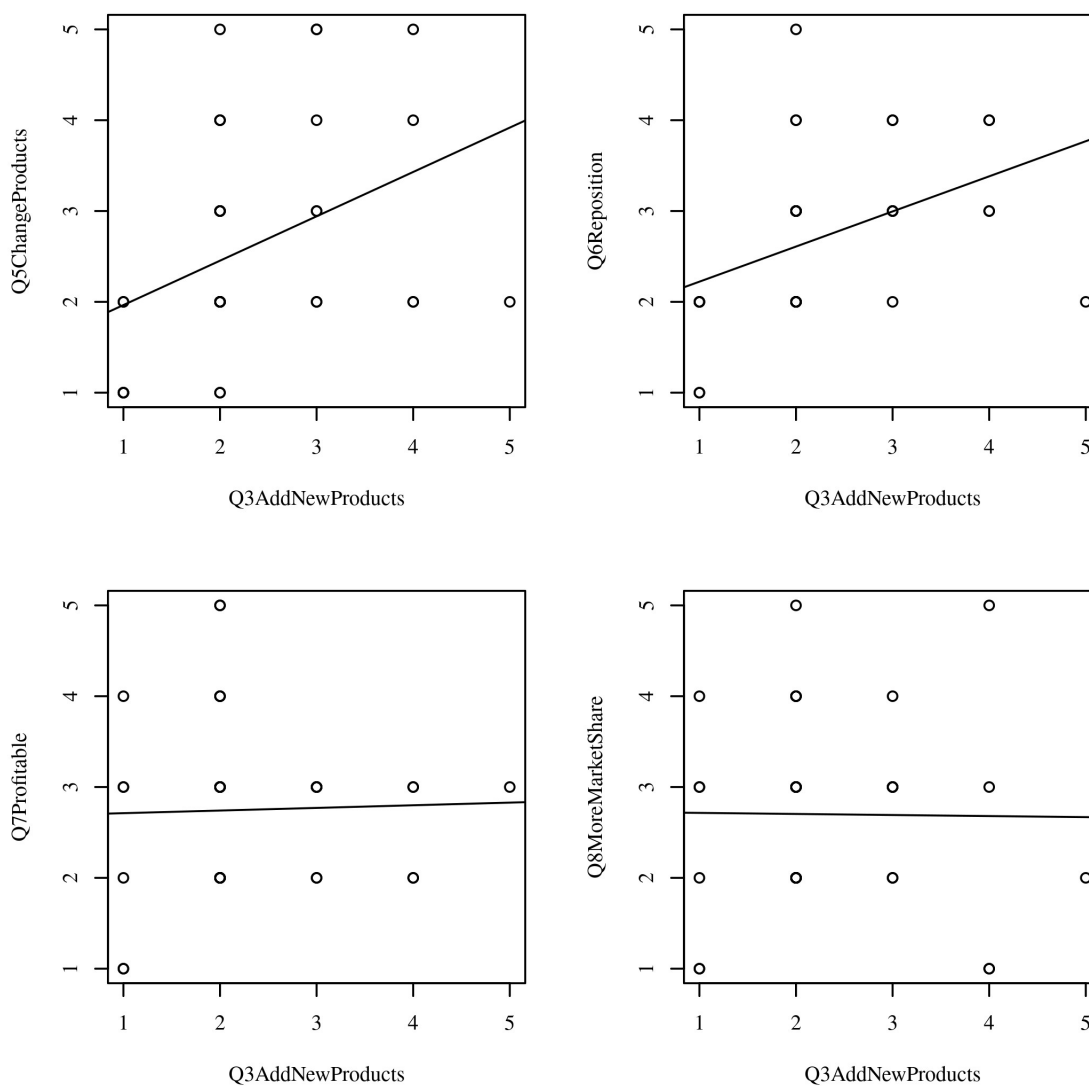
Figure E8

Scatterplots with the regression line added for Q3AddNewProducts and Q9RapidGrowth

(top left), Q3AddNewProducts and Q10PerformancePrevious12Months (top right),

Q3AddNewProducts and Q11PerformancePrevious60Months (bottom left),

Q3AddNewProducts and Q12PerformanceMetPrevious12Months (bottom right)
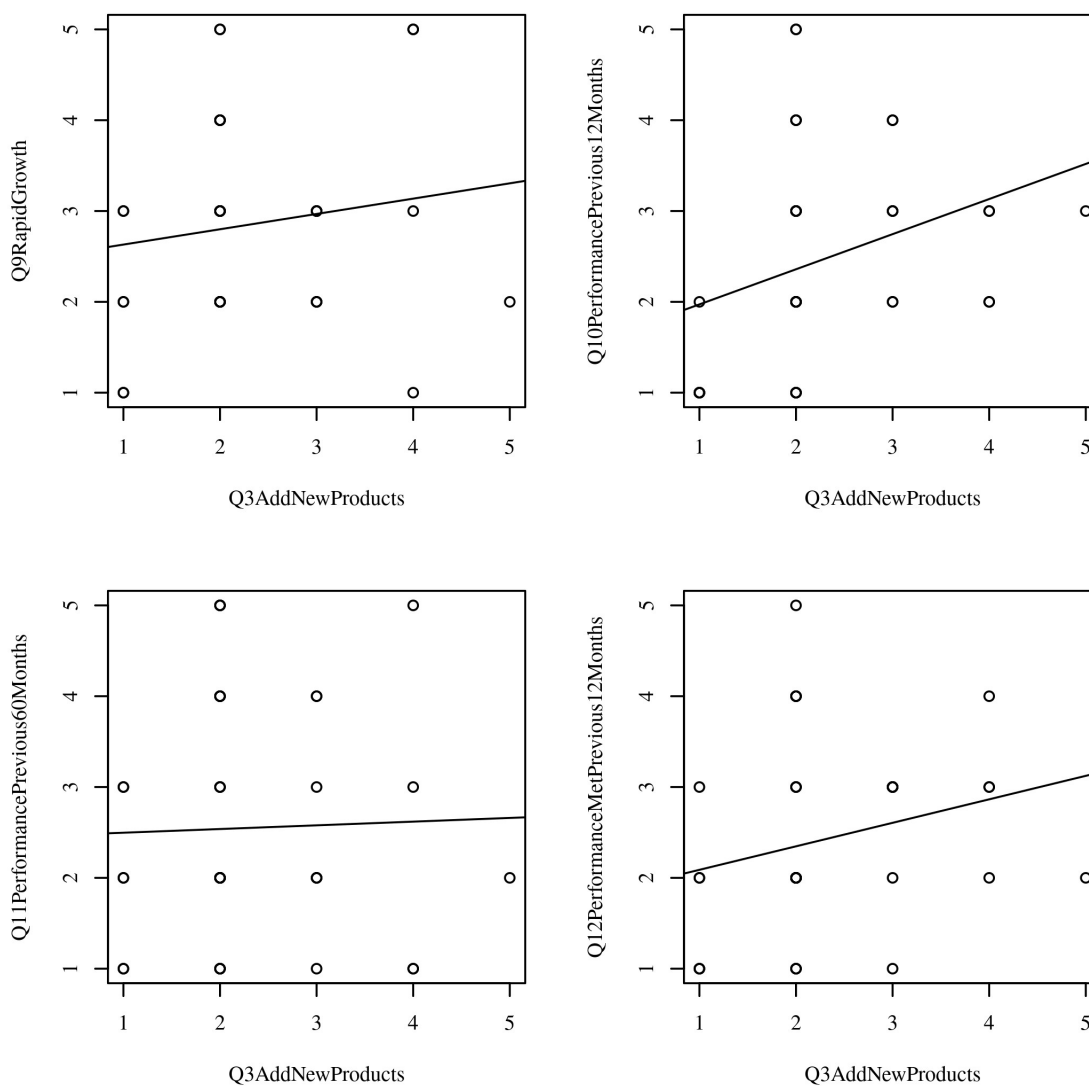
Figure E9

Scatterplots with the regression line added for Q3AddNewProducts and Q13PerformanceMetPrevious60Months (top left), Q4ImproveProducts and Q5ChangeProducts (top right), Q4ImproveProducts and Q6Reposition (bottom left), Q4ImproveProducts and Q7Profitable (bottom right)
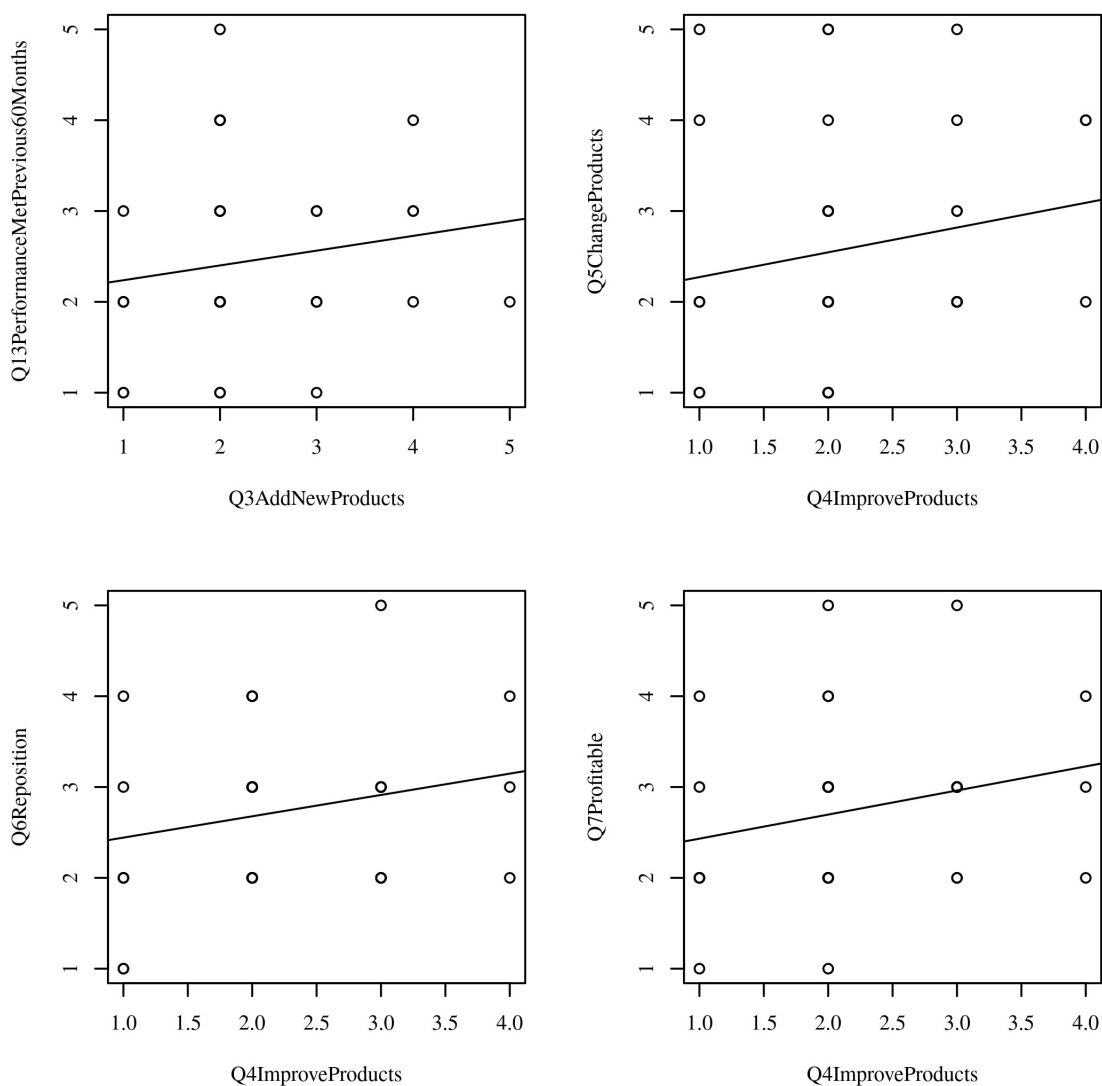
Figure E10

Scatterplots with the regression line added for Q4ImproveProducts and

Q8MoreMarketShare (top left), Q4ImproveProducts and Q9RapidGrowth (top right),

Q4ImproveProducts and Q10PerformancePrevious12Months (bottom left),

Q4ImproveProducts and Q11PerformancePrevious60Months (bottom right)
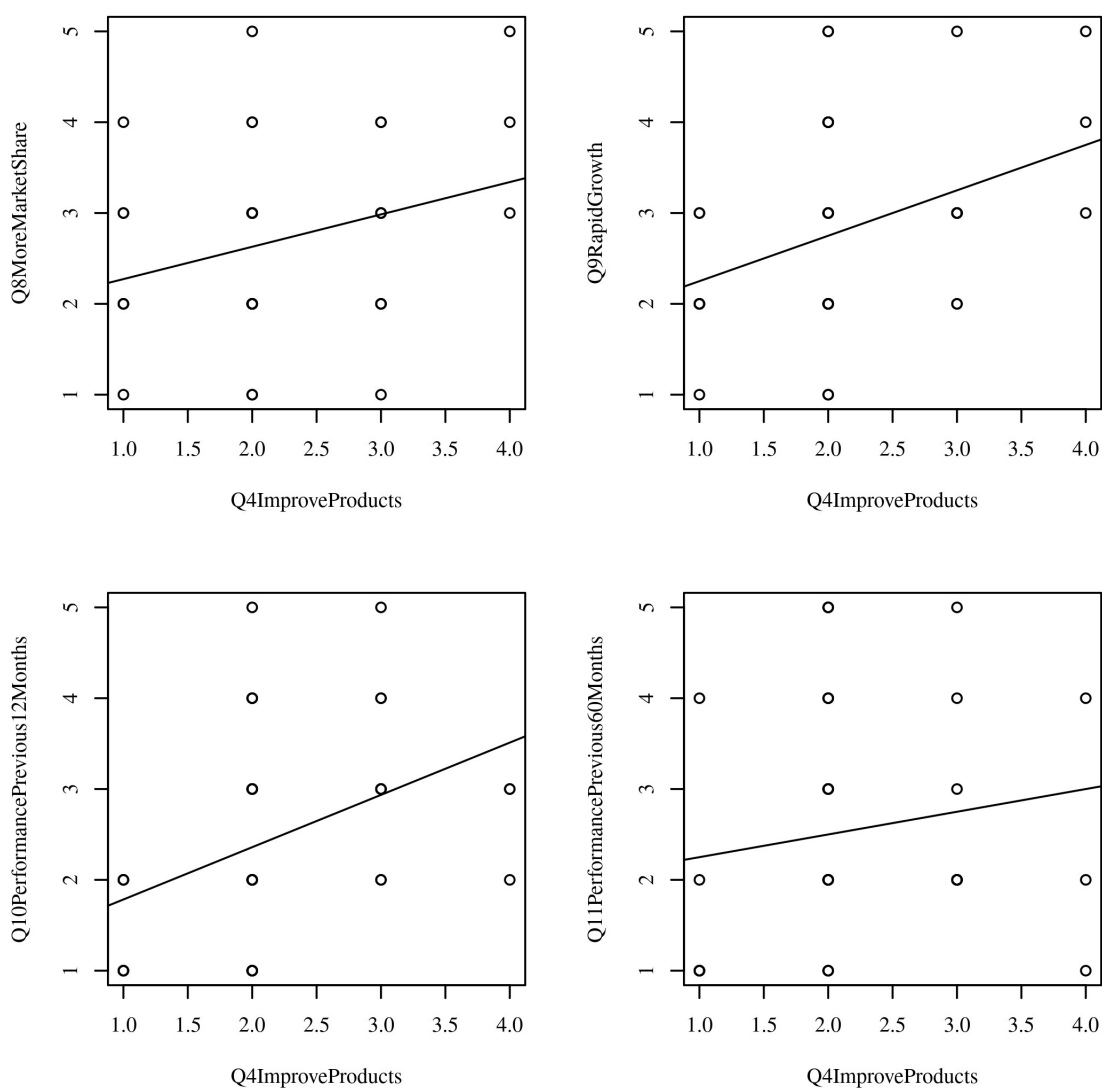
Figure E11

Scatterplots with the regression line added for Q4ImproveProducts and Q12PerformanceMetPrevious12Months (top left), Q4ImproveProducts and Q13PerformanceMetPrevious60Months (top right), Q5ChangeProducts and Q6Reposition (bottom left), Q5ChangeProducts and Q7Profitable (bottom right)
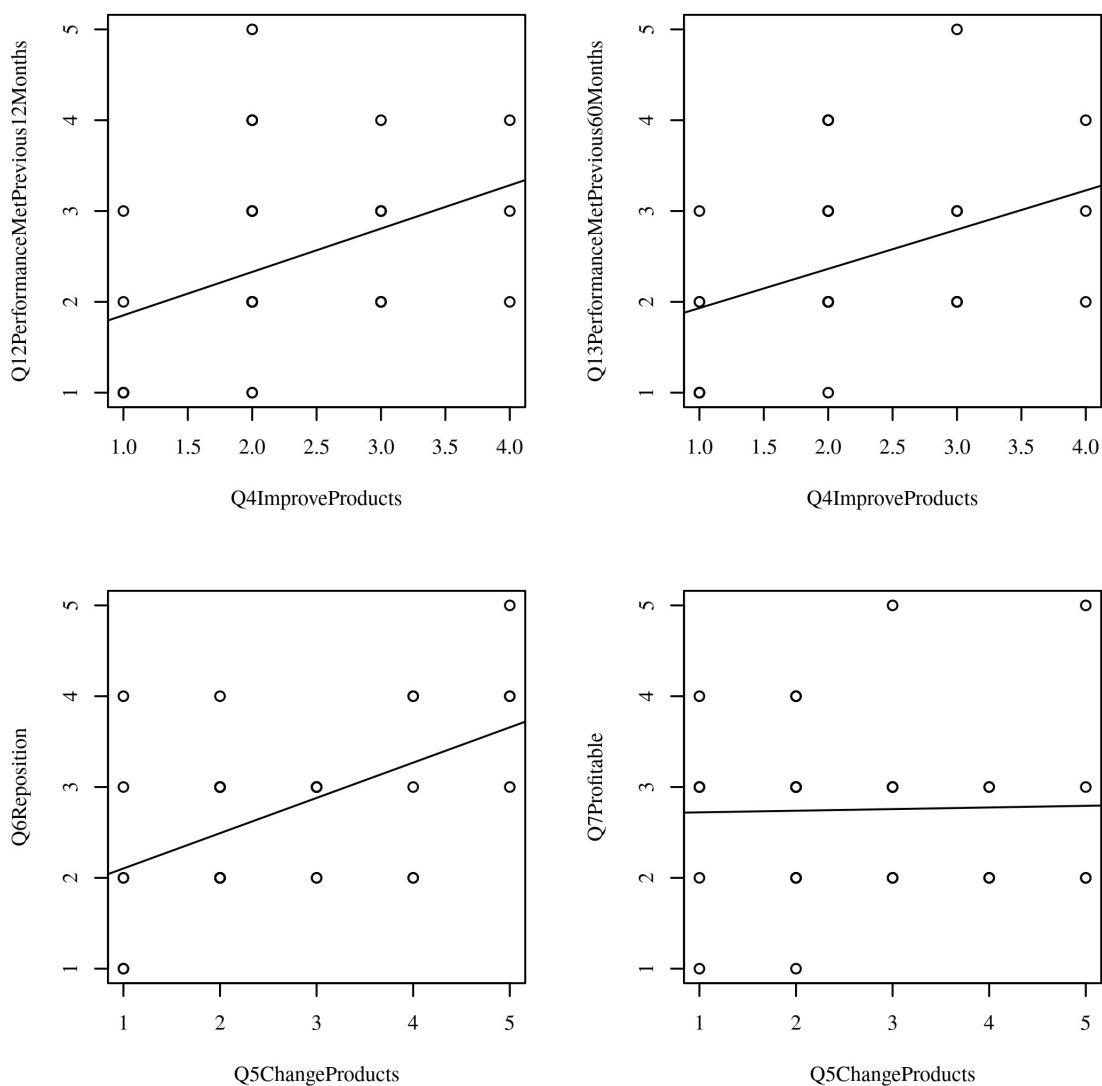
Figure E12

Scatterplots with the regression line added for Q5ChangeProducts and

Q8MoreMarketShare (top left), Q5ChangeProducts and Q9RapidGrowth (top right),

Q5ChangeProducts and Q10PerformancePrevious12Months (bottom left),

Q5ChangeProducts and Q11PerformancePrevious60Months (bottom right)
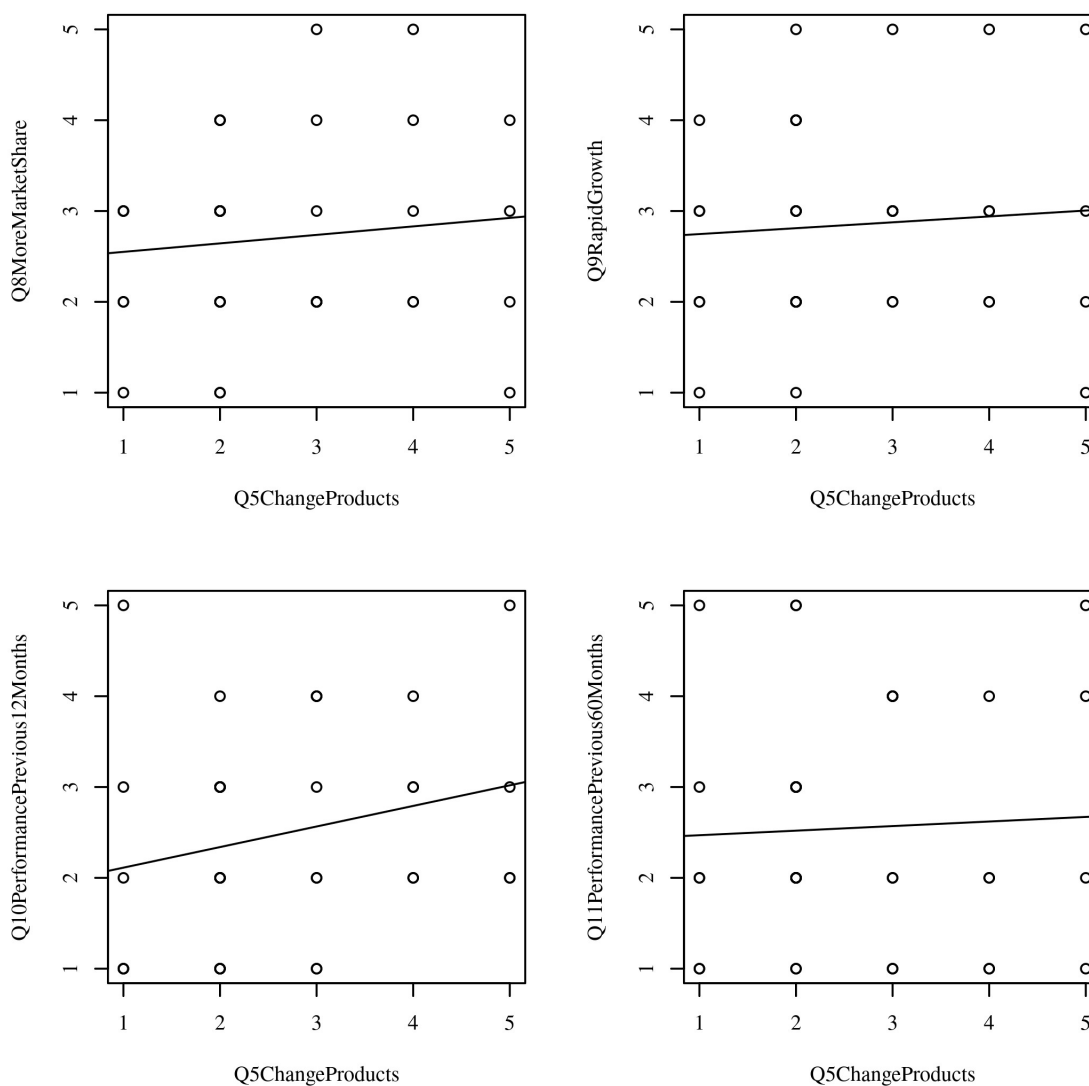
Figure E13

Scatterplots with the regression line added for Q5ChangeProducts and

Q12PerformanceMetPrevious12Months (left), Q5ChangeProducts and

Q13PerformanceMetPrevious60Months (right), Q6Reposition and Q7Profitable (left),

Q6Reposition and Q8MoreMarketShare (right)
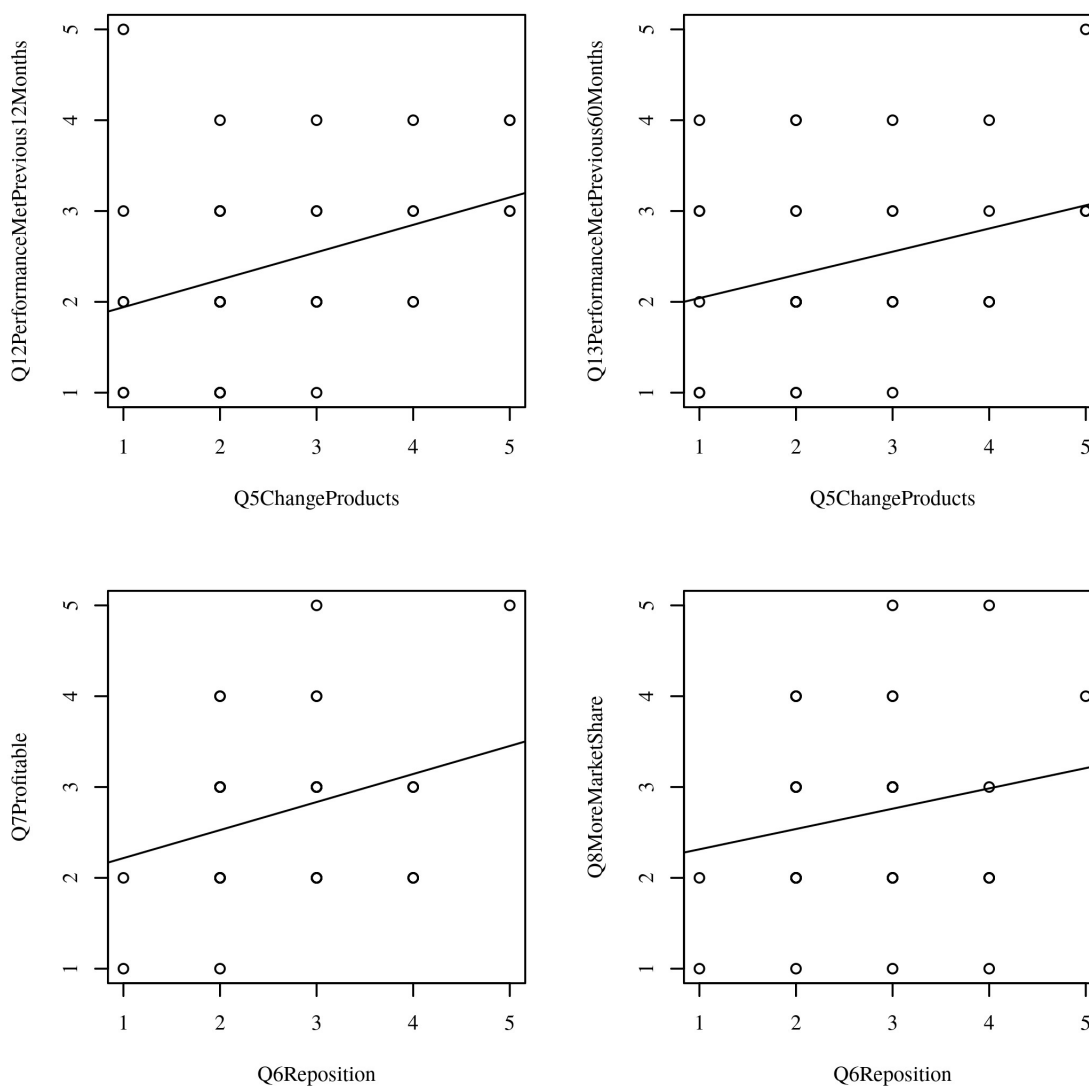
Figure E14

Scatterplots with the regression line added for Q6Reposition and Q9RapidGrowth (left),

Q6Reposition and Q10PerformancePrevious12Months (right), Q6Reposition and

Q11PerformancePrevious60Months (left), Q6Reposition and

Q12PerformanceMetPrevious12Months (right)

Figure E15

Scatterplots with the regression line added for Q6Reposition and

Q13PerformanceMetPrevious60Months (left), Q7Profitable and Q8MoreMarketShare

(right), Q7Profitable and Q9RapidGrowth (left), Q7Profitable and

Q10PerformancePrevious12Months (right)
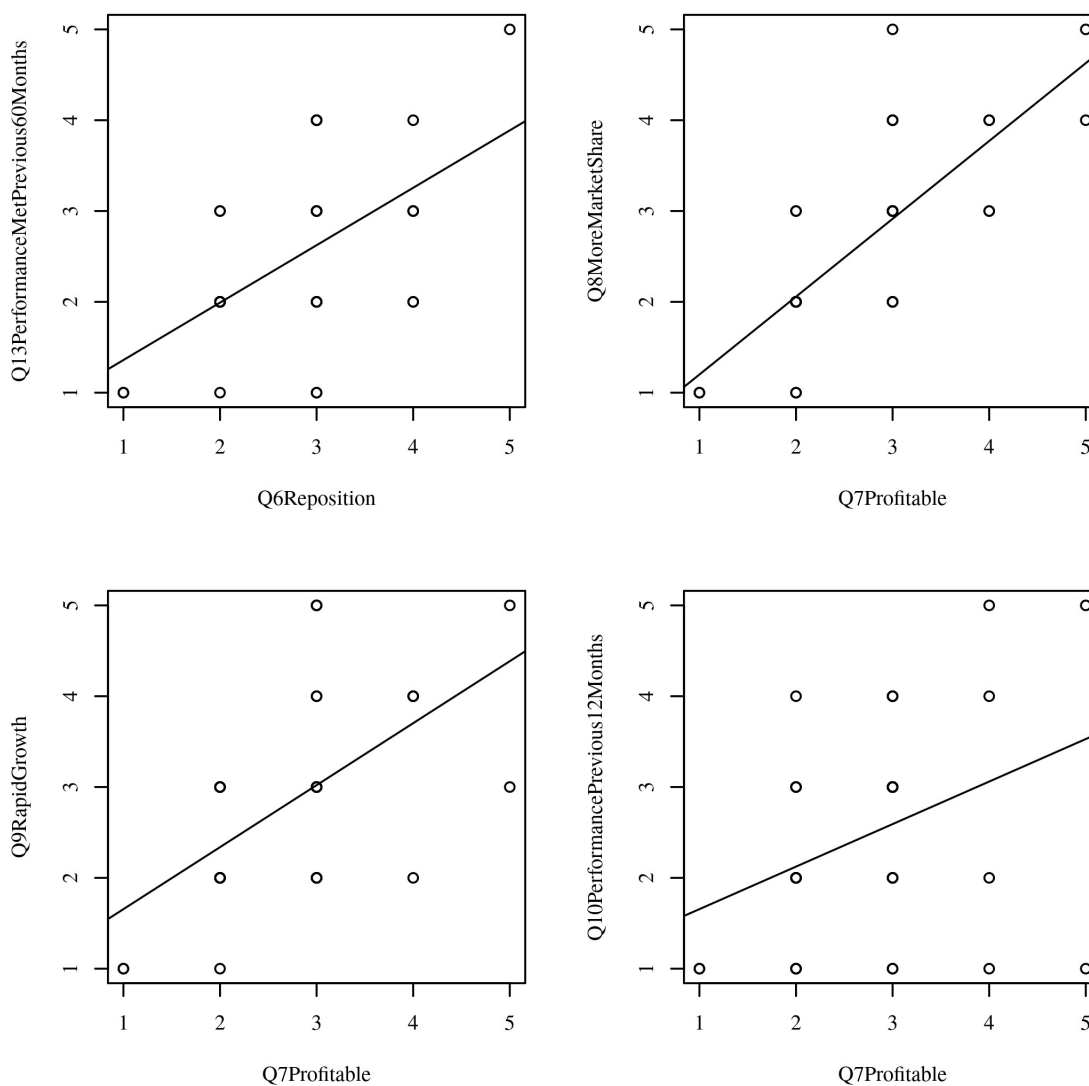
Figure E16

Scatterplots with the regression line added for Q7Profitable and

Q11PerformancePrevious60Months (left), Q7Profitable and

Q12PerformanceMetPrevious12Months (right), Q7Profitable and

Q13PerformanceMetPrevious60Months (left), Q8MoreMarketShare and

Q9RapidGrowth (right)
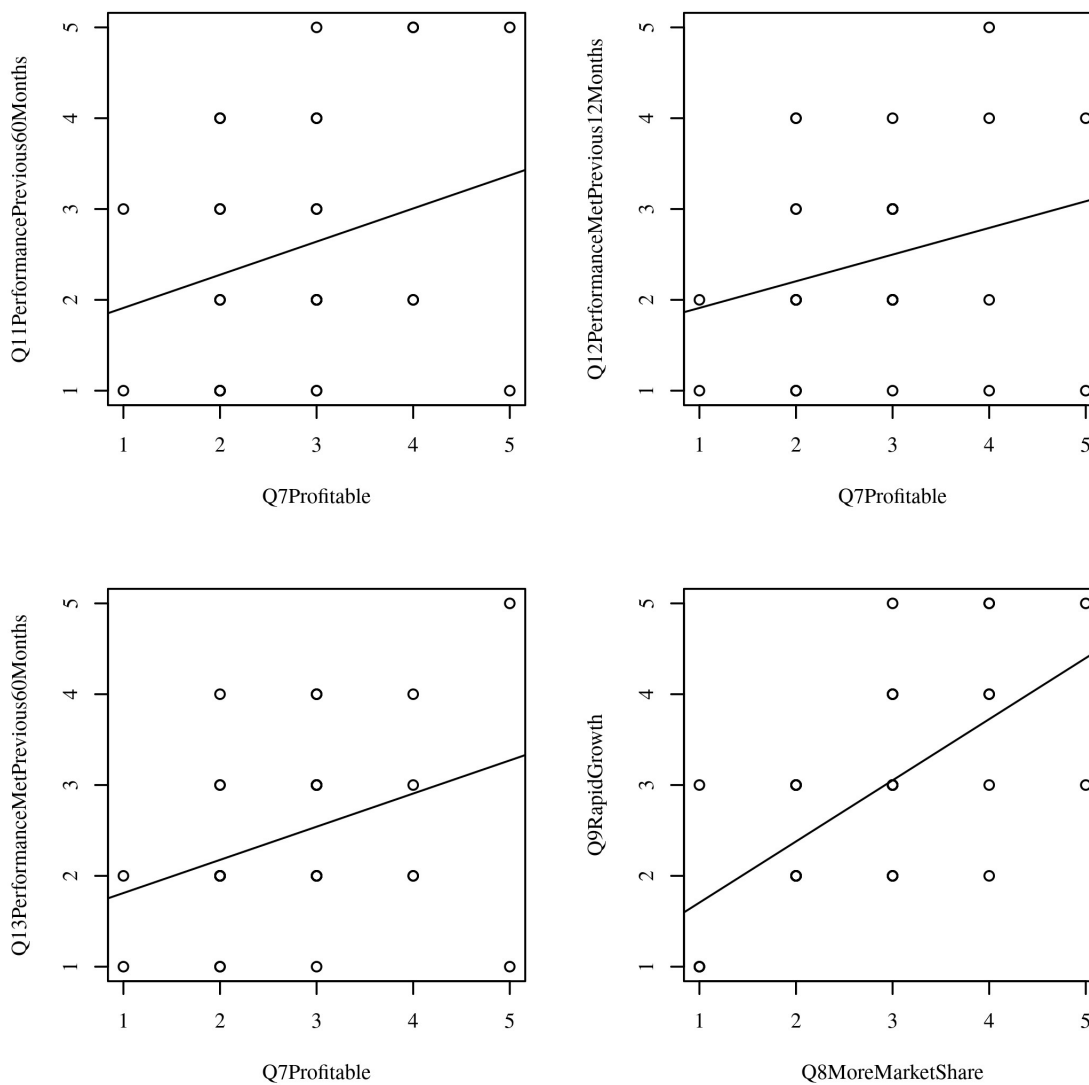
Figure E17

Scatterplots with the regression line added for Q8MoreMarketShare and

Q10PerformancePrevious12Months (left), Q8MoreMarketShare and

Q11PerformancePrevious60Months (right), Q9RapidGrowth and

Q10PerformancePrevious12Months (left), Q9RapidGrowth and

Q11PerformancePrevious60Months (right)
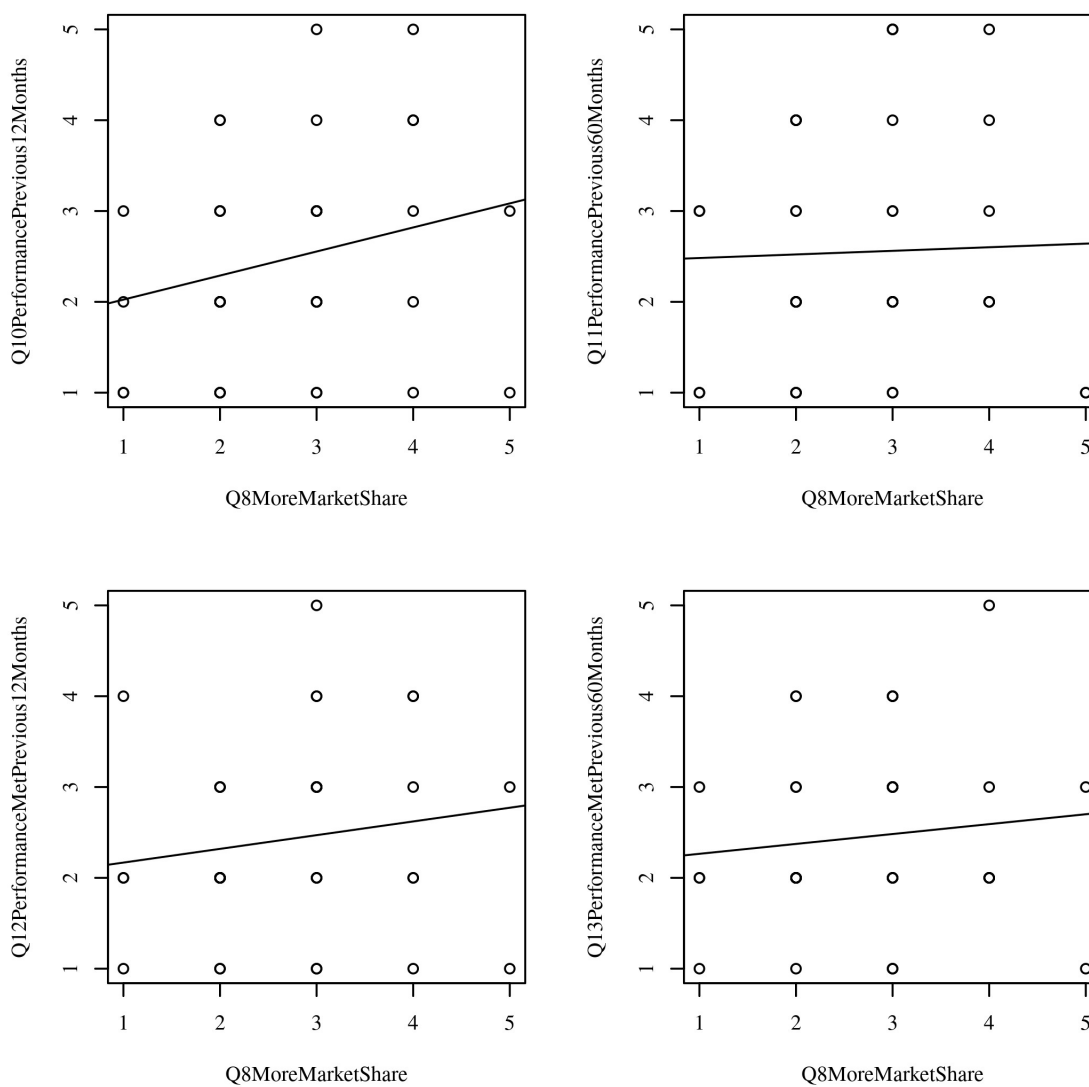
Figure E18

Scatterplots with the regression line added for Q9RapidGrowth and

Q12PerformanceMetPrevious12Months (left), Q9RapidGrowth and

Q13PerformanceMetPrevious60Months (right)
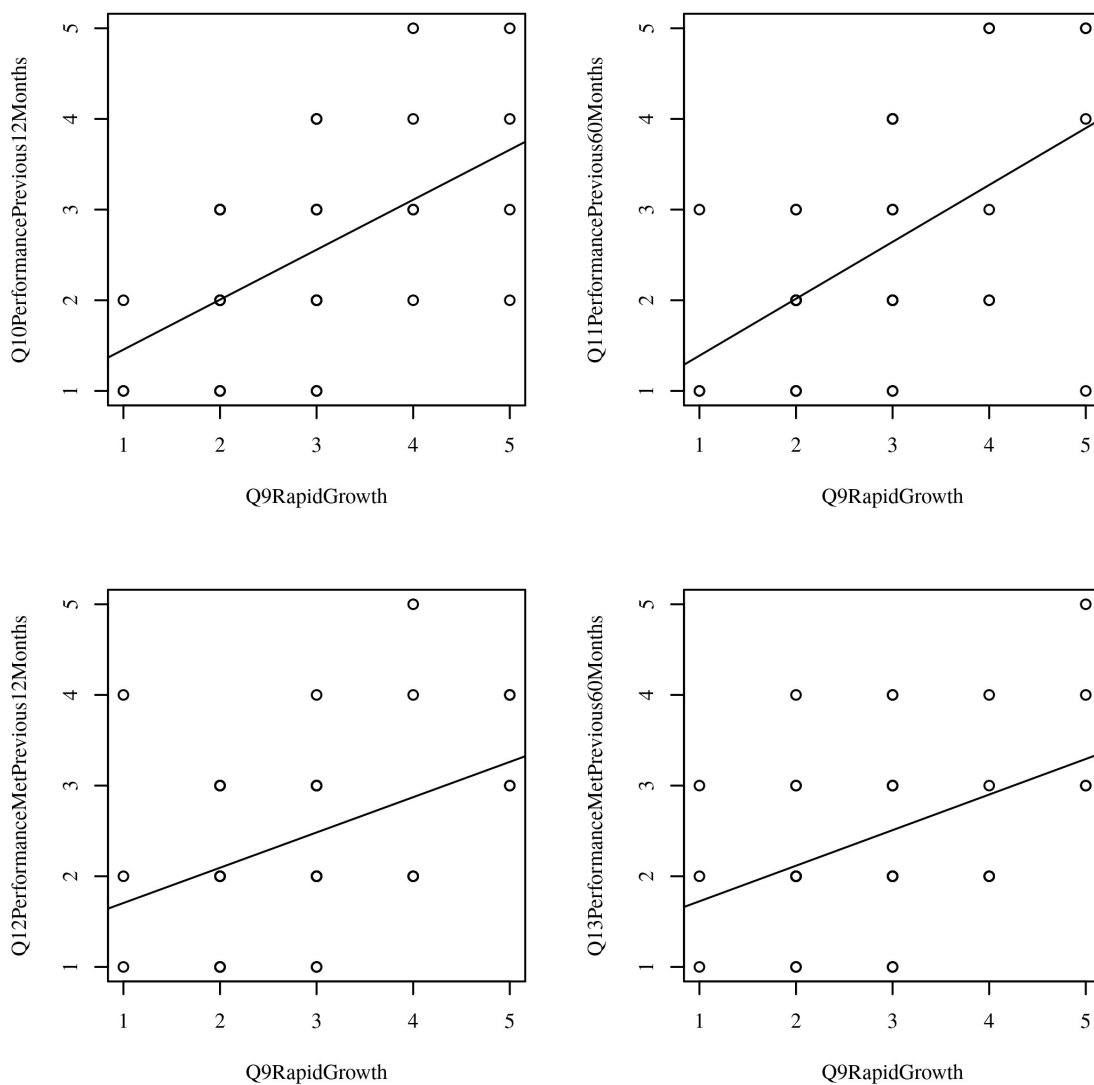
Figure E19

Scatterplots with the regression line added for Q10PerformancePrevious12Months and

Q11PerformancePrevious60Months (left), Q10PerformancePrevious12Months and

Q12PerformanceMetPrevious12Months (right), Q10PerformancePrevious12Months and

Q13PerformanceMetPrevious60Months (left), Q11PerformancePrevious60Months and

Q12PerformanceMetPrevious12Months (right)
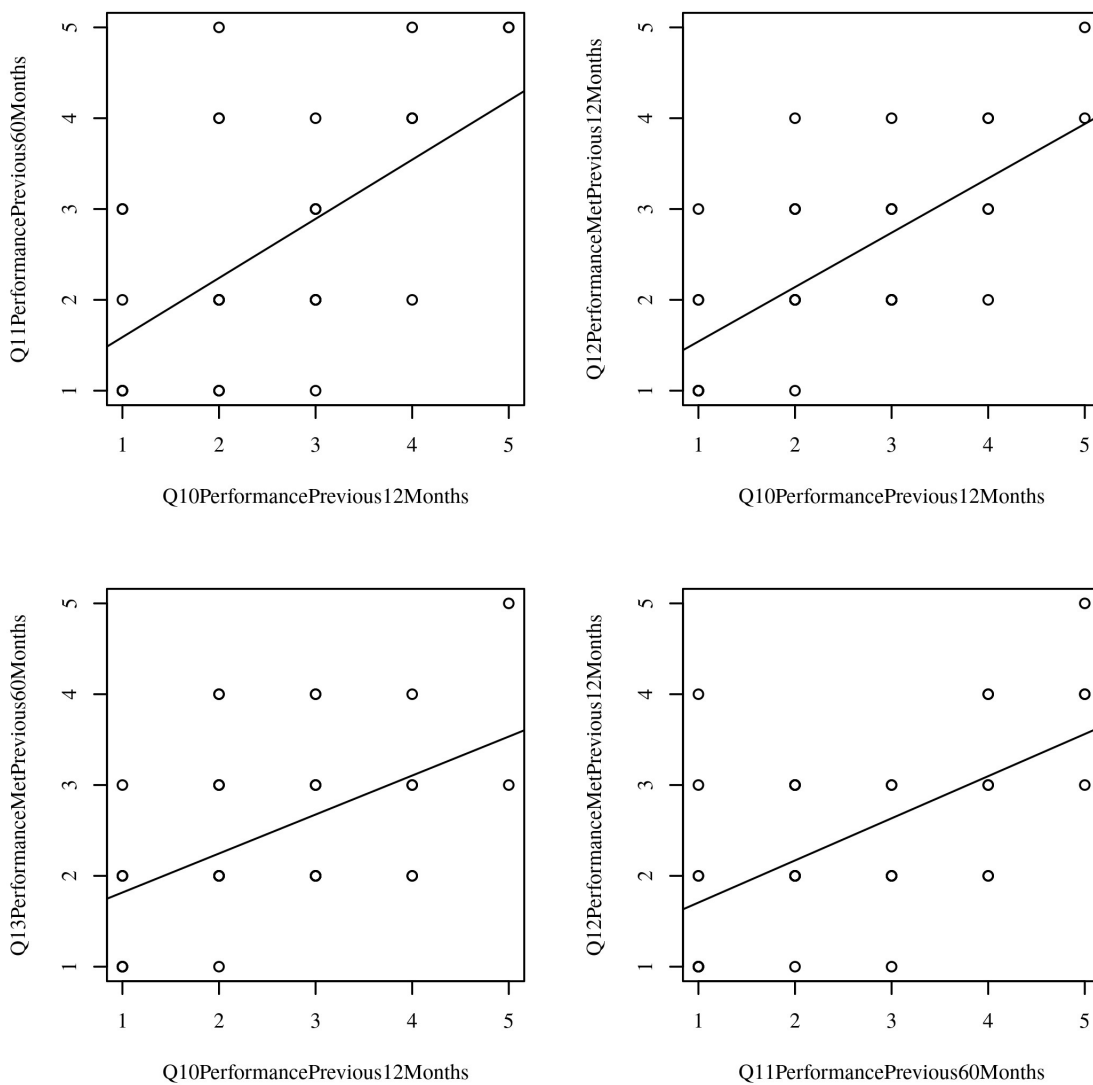
Figure E20

Scatterplots with the regression line added for Q11PerformancePrevious60Months and

Q13PerformanceMetPrevious60Months (left), Q12PerformanceMetPrevious12Months

and Q13PerformanceMetPrevious60Months (right)
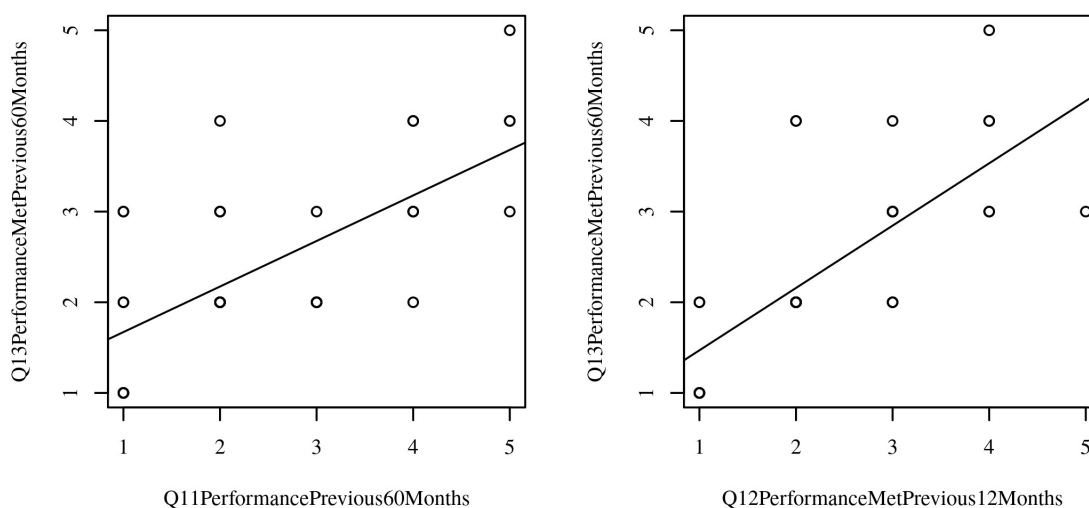
Bivariate normality. Some authors also consider bivariate normality to be an

assumption of the Pearson correlation coefficient (Bonett & Wright, 2000; Chok, 2010).

Bivariate normality was assessed by plotting the squared Mahalanobis distances for each

pair of variables against the quantiles of a Chi-square distribution (DeCarlo, 1997; Field,

2017). In the scatterplot, the solid line represents the theoretical quantiles of a normal

distribution. Normality can be assumed if the points form a relatively straight line. The

scatterplots for normality are presented in Figure E21-Figure E28.

Figure E21

Chi-square Q-Q plot for squared Mahalanobis distances between Q1LaunchProducts and Q2RangeOfProNotOffered (left), Q1LaunchProducts and Q3AddNewProducts (right), Q1LaunchProducts and Q4ImproveProducts (left), Q1LaunchProducts and Q5ChangeProducts (right)
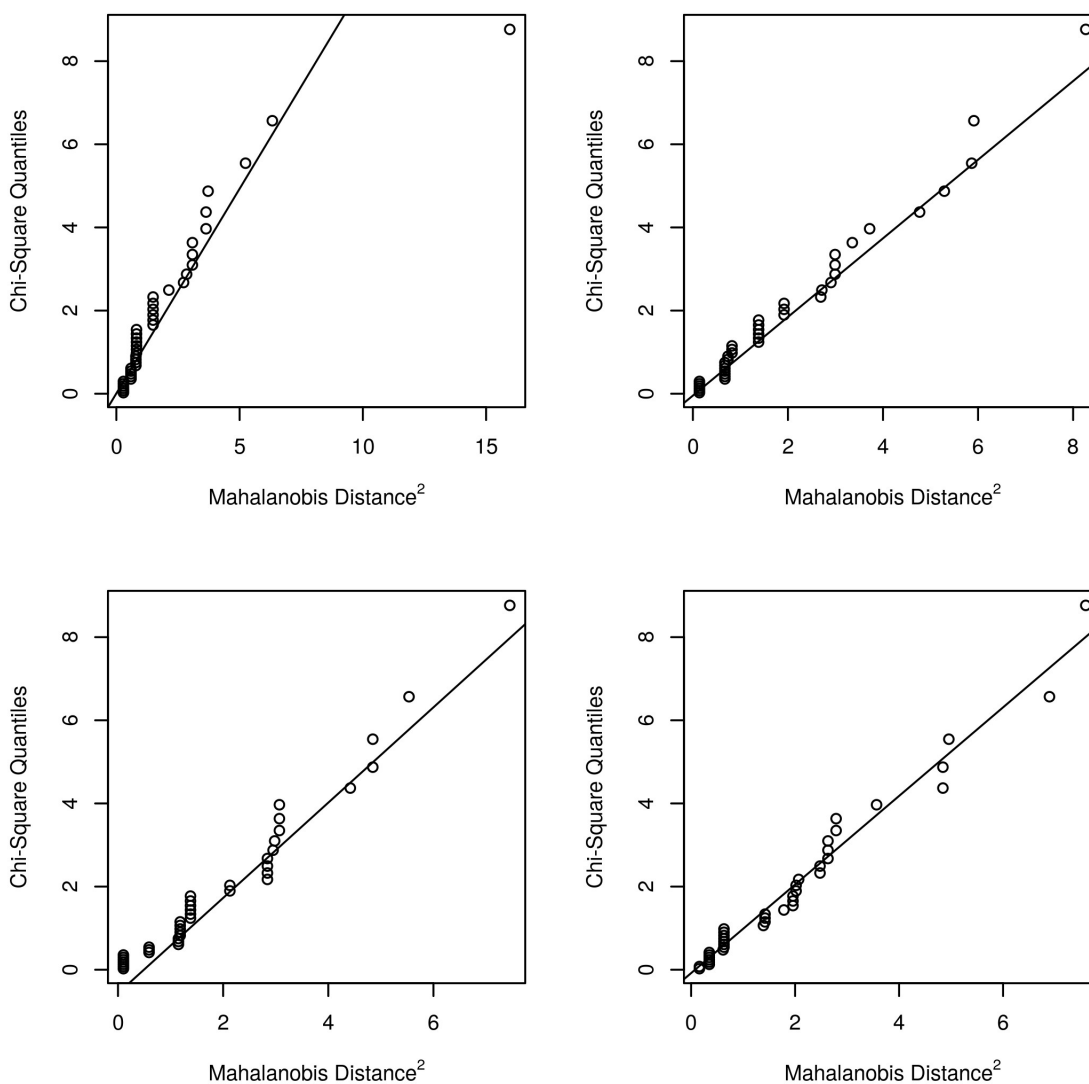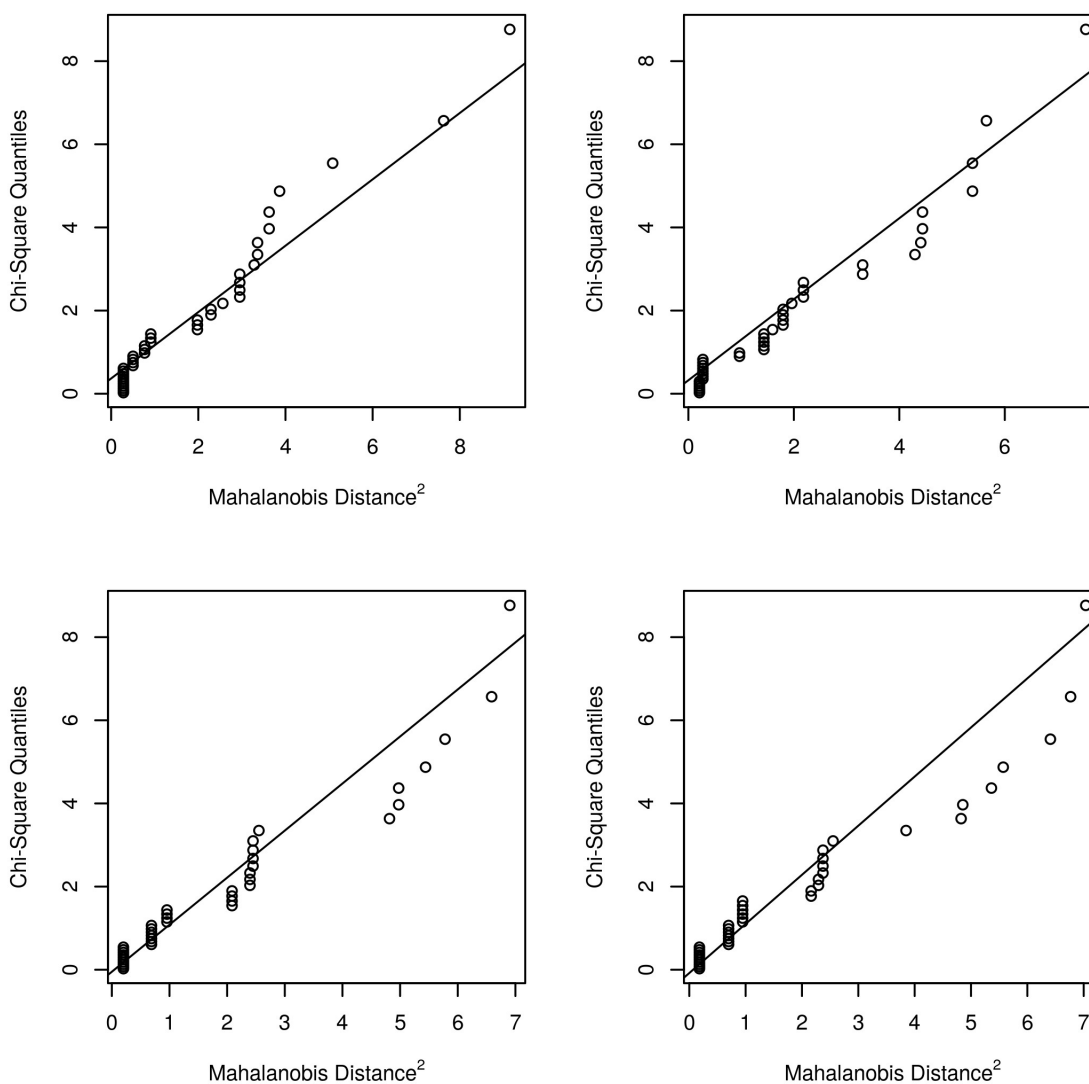
Figure E22

Chi-square Q-Q plot for squared Mahalanobis distances between Q1LaunchProducts and Q6Reposition (left), Q1LaunchProducts and Q7Profitable (right), Q1LaunchProducts and Q8MoreMarketShare (left), Q1LaunchProducts and Q9RapidGrowth (right)

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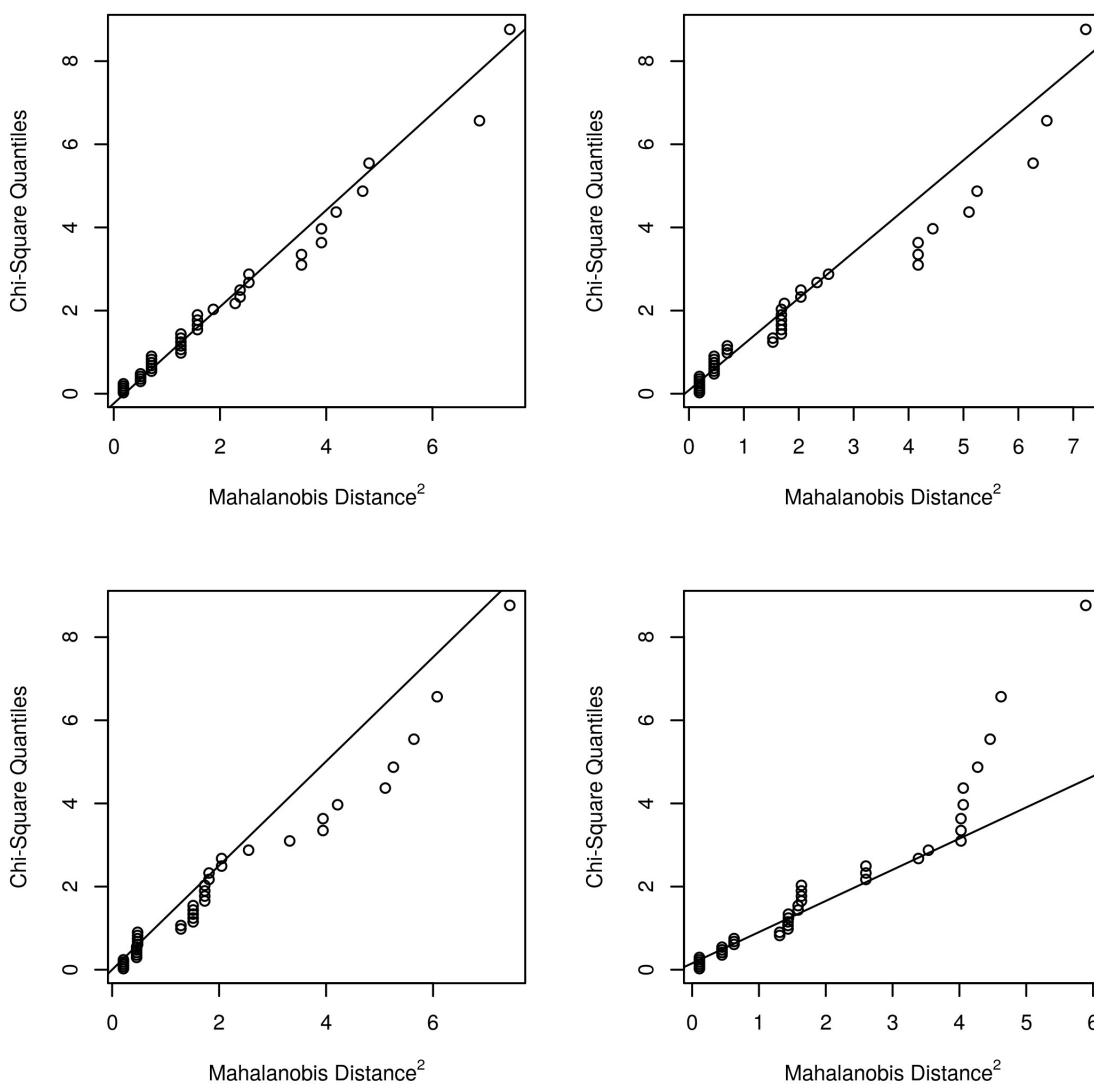
Figure E23

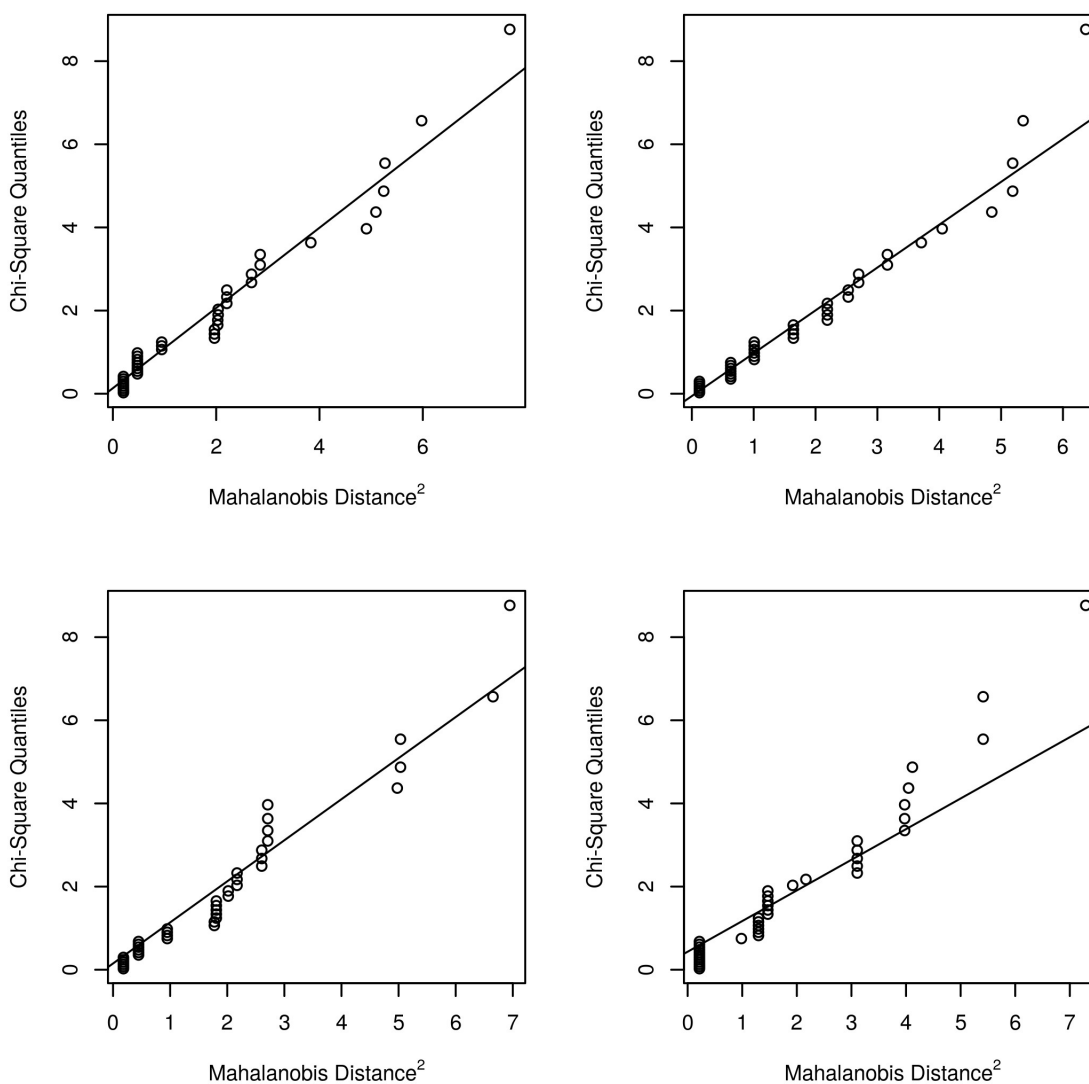*Chi-square Q-Q plot for squared Mahalanobis distances between Q1LaunchProducts*

and Q10PerformancePrevious12Months (left), Q1LaunchProducts and

Q11PerformancePrevious60Months (right), Q1LaunchProducts and

Q12PerformanceMetPrevious12Months (left), Q1LaunchProducts and

Q13PerformanceMetPrevious60Months (right)
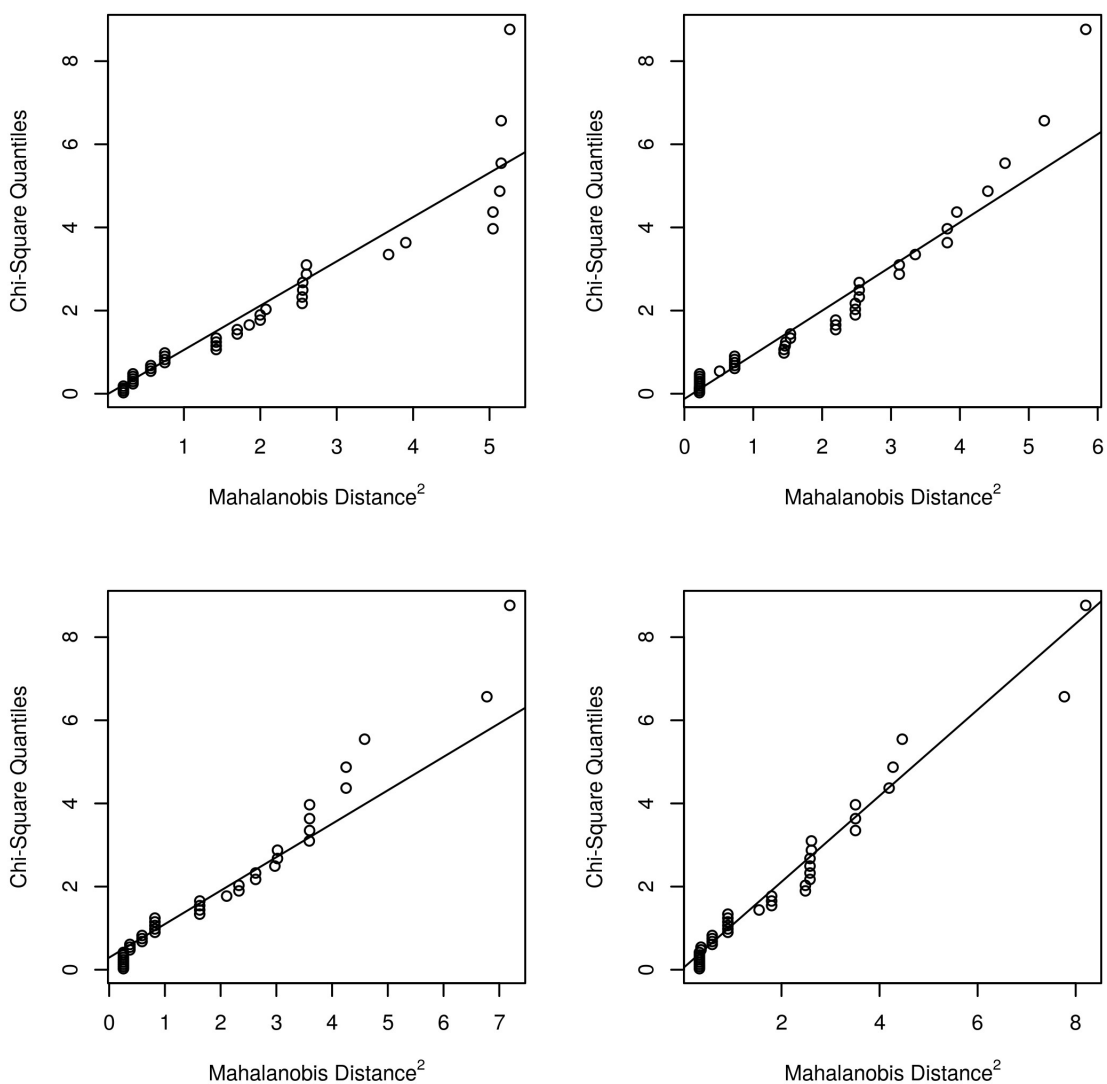
Figure 24

Chi-square Q-Q plot for squared Mahalanobis distances between Q2RangeOfProNotOffered and Q3AddNewProducts (left), Q2RangeOfProNotOffered and Q4ImproveProducts (right), Q2RangeOfProNotOffered and Q5ChangeProducts (left), Q2RangeOfProNotOffered and Q6Reposition (right)
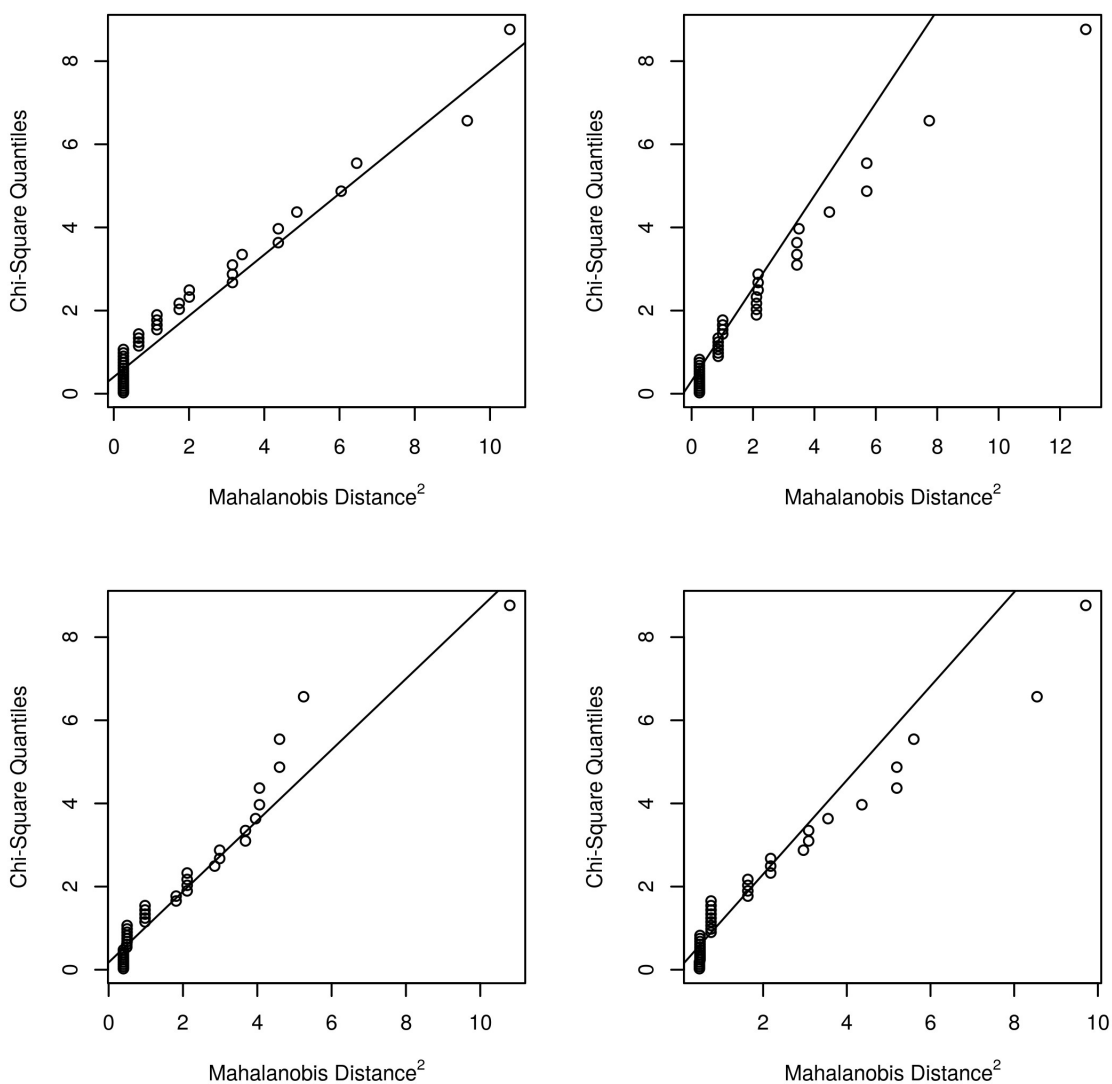
Figure E25

Chi-square Q-Q plot for squared Mahalanobis distances between Q2RangeOfProNotOffered and Q7Profitable (left), Q2RangeOfProNotOffered and Q8MoreMarketShare (right), Q2RangeOfProNotOffered and Q9RapidGrowth (left), Q2RangeOfProNotOffered and Q10PerformancePrevious12Months (right)
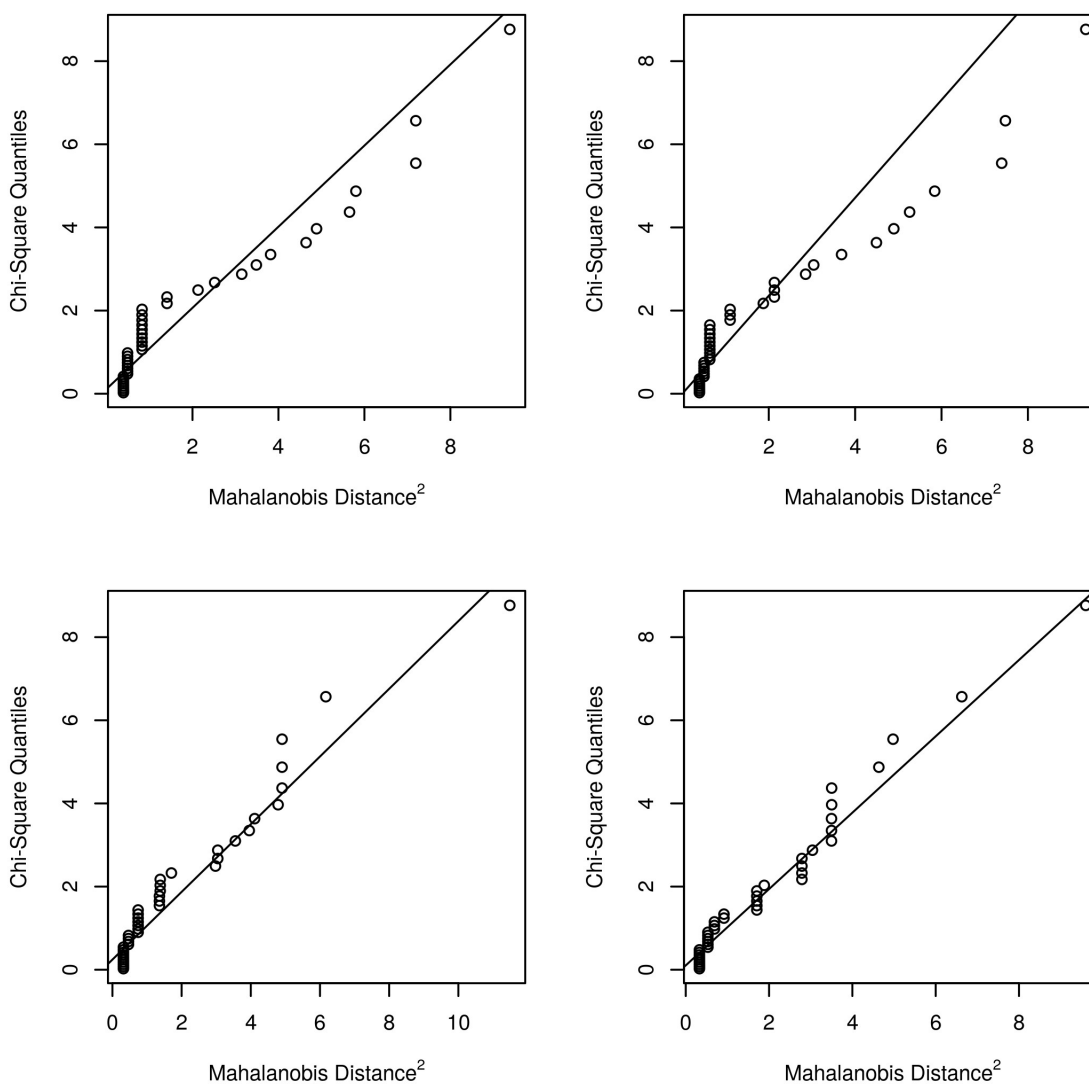
Figure E26

Chi-square Q-Q plot for squared Mahalanobis distances between

Q2RangeOfProNotOffered and Q11PerformancePrevious60Months (left),

Q2RangeOfProNotOffered and Q12PerformanceMetPrevious12Months (right),

Q2RangeOfProNotOffered and Q13PerformanceMetPrevious60Months (left),

Q3AddNewProducts and Q4ImproveProducts (right)

156
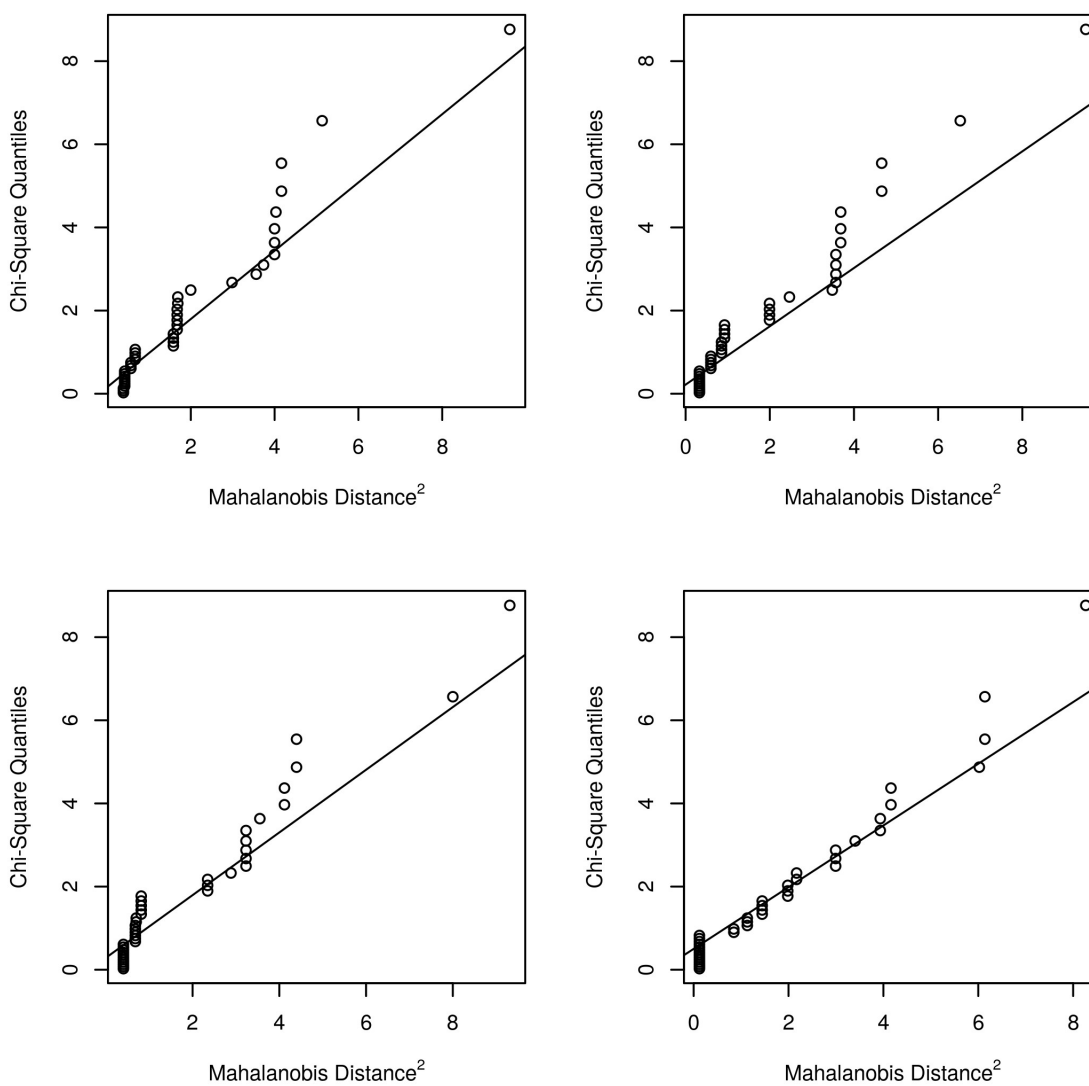
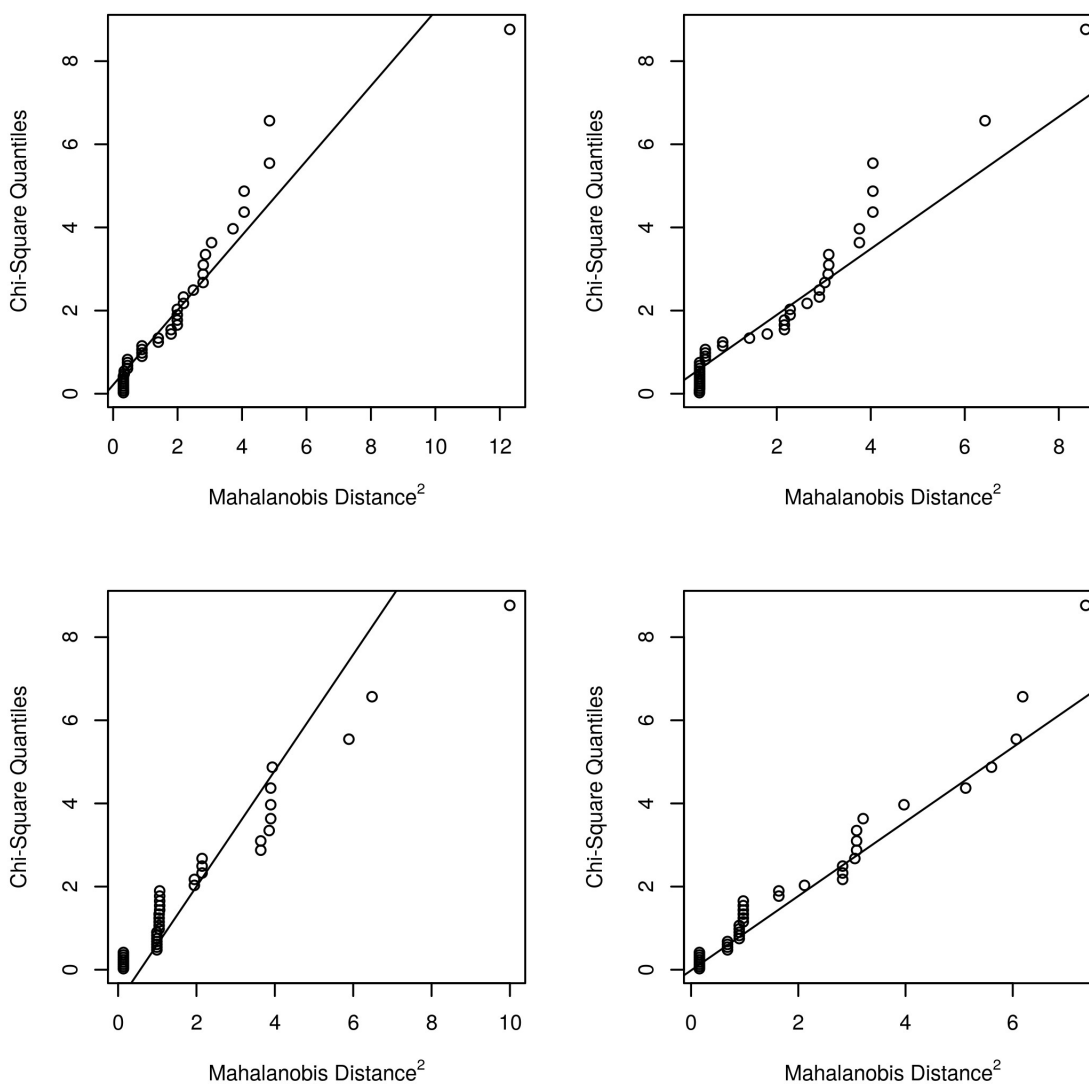**Figure E27**

Chi-square Q-Q plot for squared Mahalanobis distances between Q3AddNewProducts and Q5ChangeProducts (left), Q3AddNewProducts and Q6Reposition (right), Q3AddNewProducts and Q7Profitable (left), Q3AddNewProducts and Q8MoreMarketShare (right)
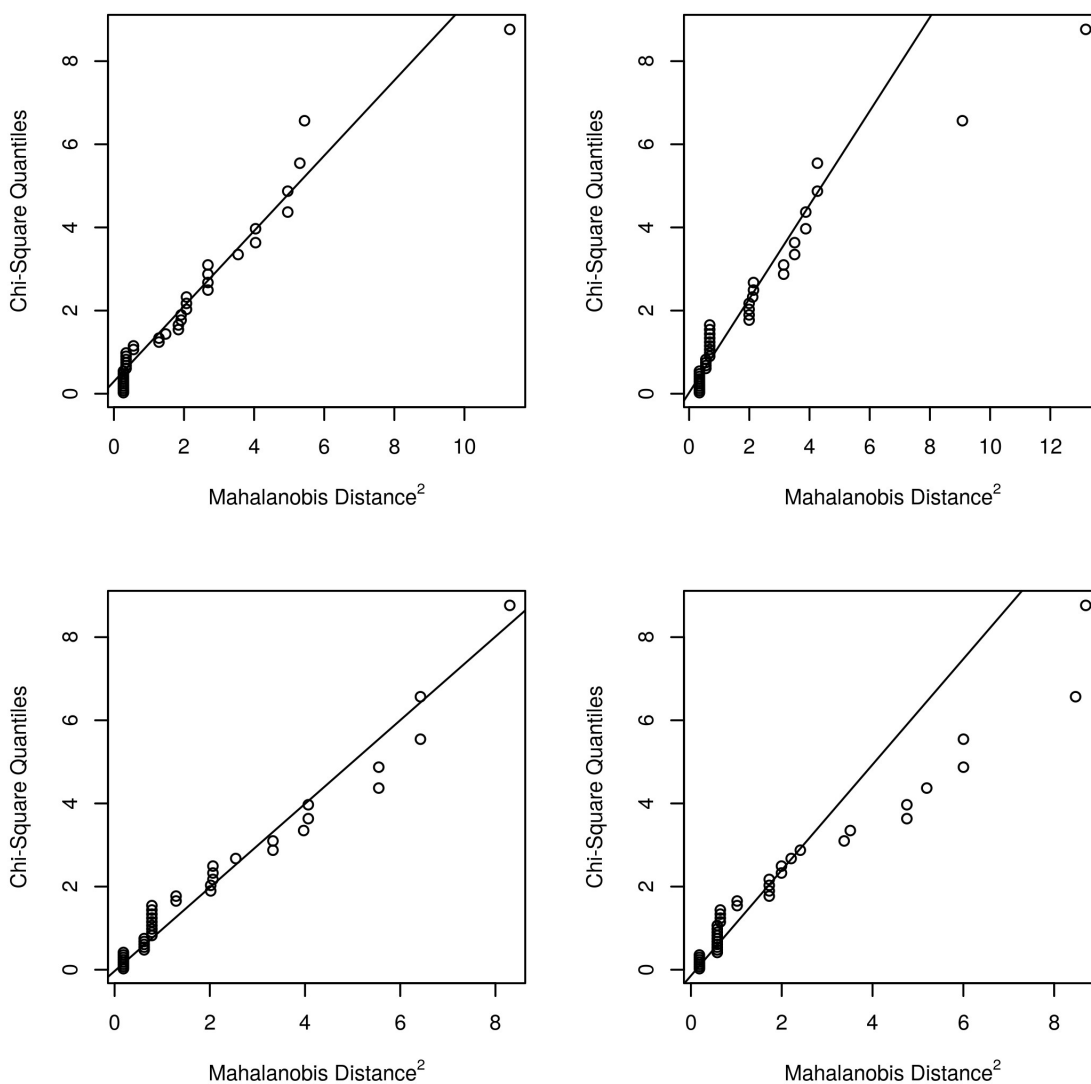
Figure E28

Chi-square Q-Q plot for squared Mahalanobis distances between Q3AddNewProducts and Q9RapidGrowth (left), Q3AddNewProducts and Q10PerformancePrevious12Months (right), Q3AddNewProducts and Q11PerformancePrevious60Months (left), Q3AddNewProducts and Q12PerformanceMetPrevious12Months (right)
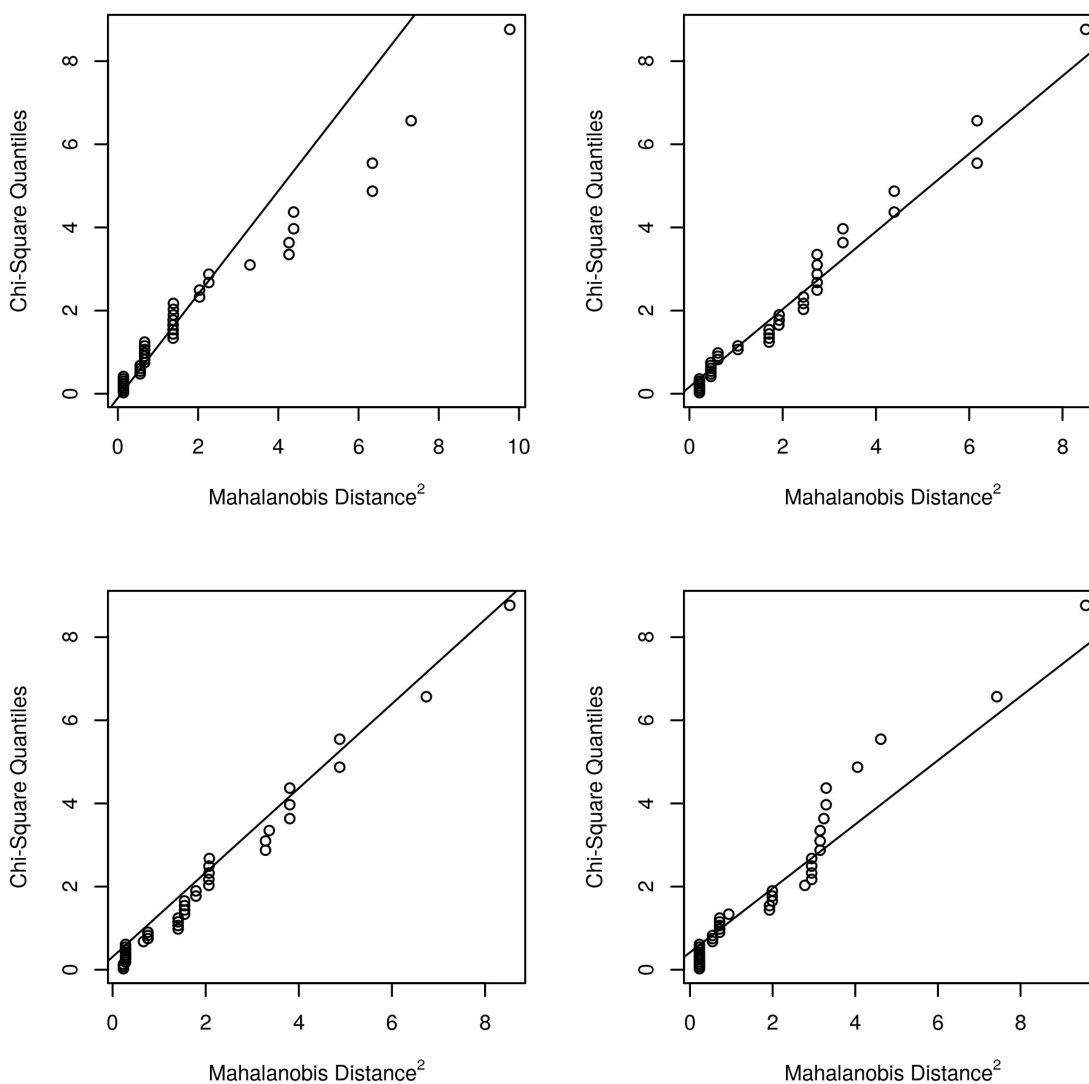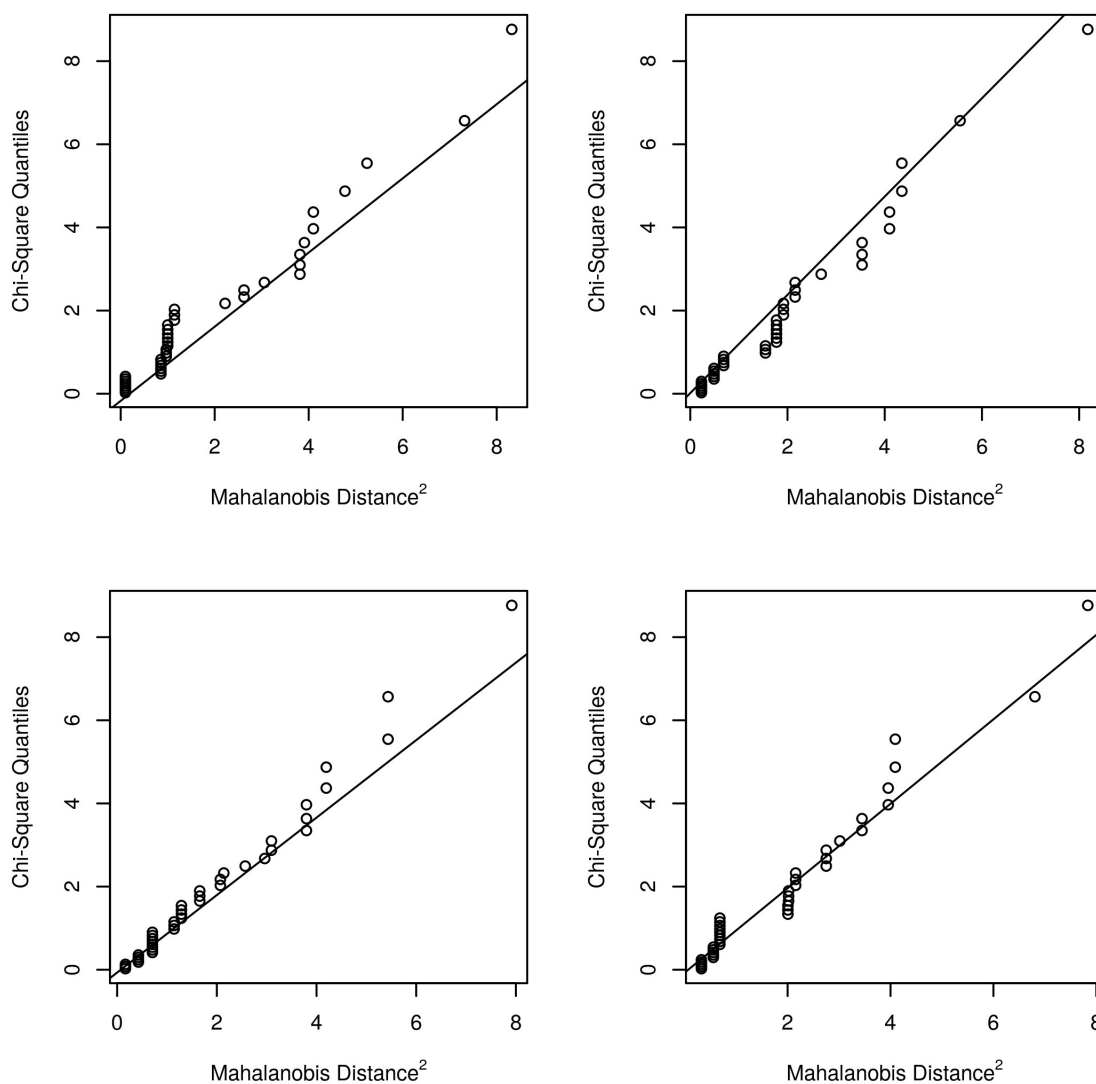
Figure E29

Chi-square Q-Q plot for squared Mahalanobis distances between Q3AddNewProducts and Q13PerformanceMetPrevious60Months (left), Q4ImproveProducts and Q5ChangeProducts (right), Q4ImproveProducts and Q6Reposition (left), Q4ImproveProducts and Q7Profitable (right)

Figure E30

Chi-square Q-Q plot for squared Mahalanobis distances between Q4ImproveProducts and Q8MoreMarketShare (left), Q4ImproveProducts and Q9RapidGrowth (right), Q4ImproveProducts and Q10PerformancePrevious12Months (left), Q4ImproveProducts and Q11PerformancePrevious60Months (right)
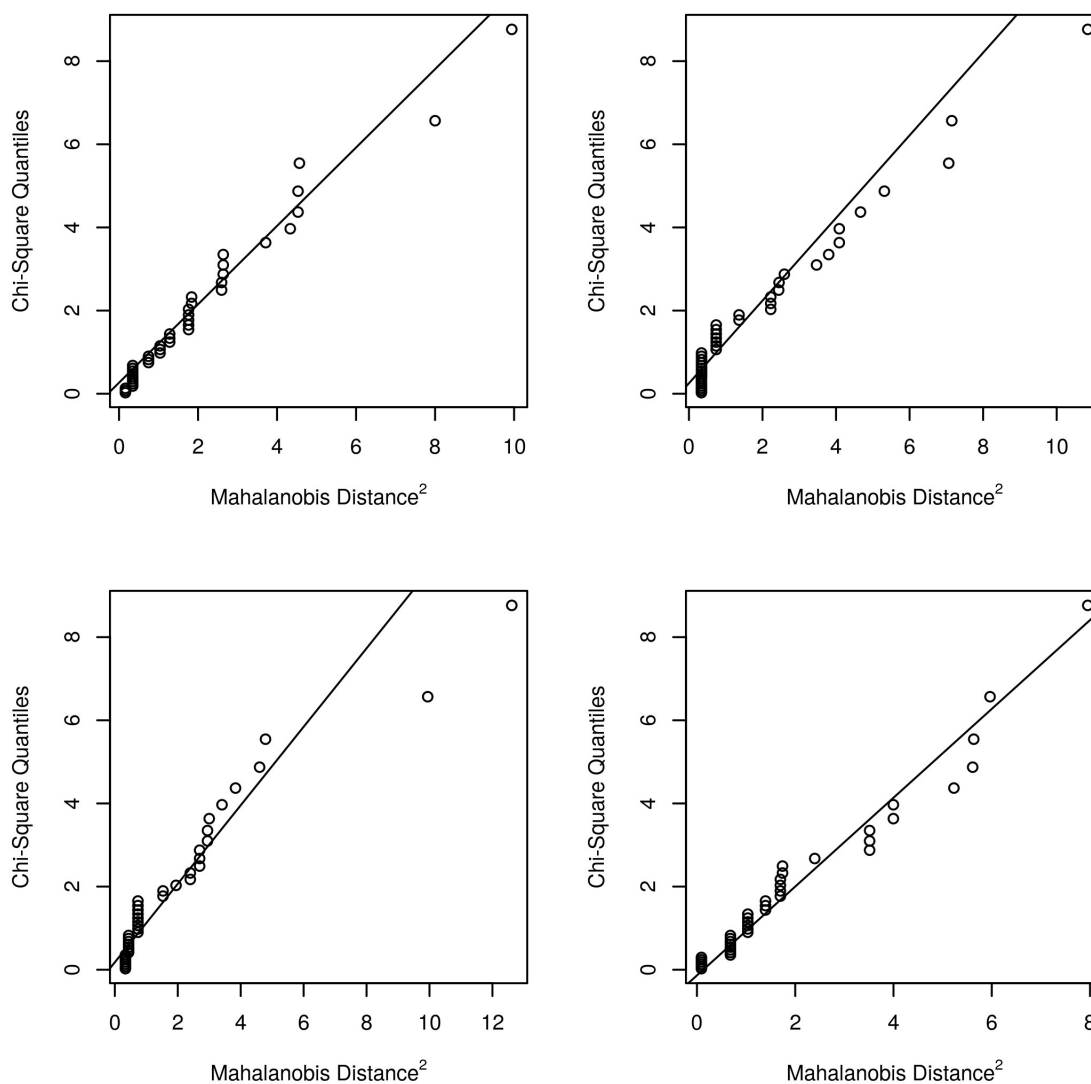
Figure E31

Chi-square Q-Q plot for squared Mahalanobis distances between Q4ImproveProducts and Q12PerformanceMetPrevious12Months (left), Q4ImproveProducts and Q13PerformanceMetPrevious60Months (right), Q5ChangeProducts and Q6Reposition (left), Q5ChangeProducts and Q7Profitable (right)
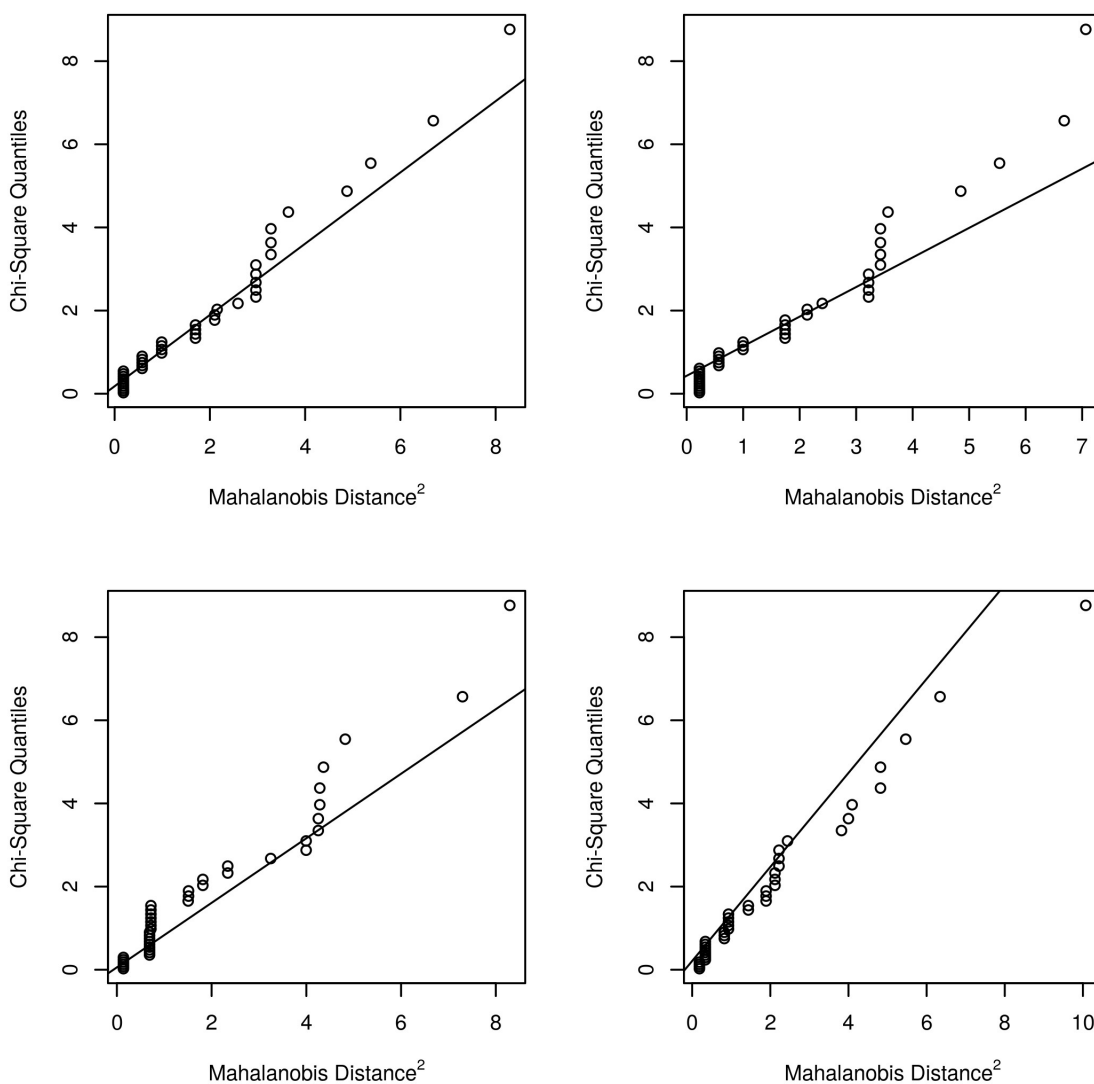
Figure E32

Chi-square Q-Q plot for squared Mahalanobis distances between Q5ChangeProducts and Q8MoreMarketShare (left), Q5ChangeProducts and Q9RapidGrowth (right), Q5ChangeProducts and Q10PerformancePrevious12Months (left), Q5ChangeProducts and Q11PerformancePrevious60Months (right)
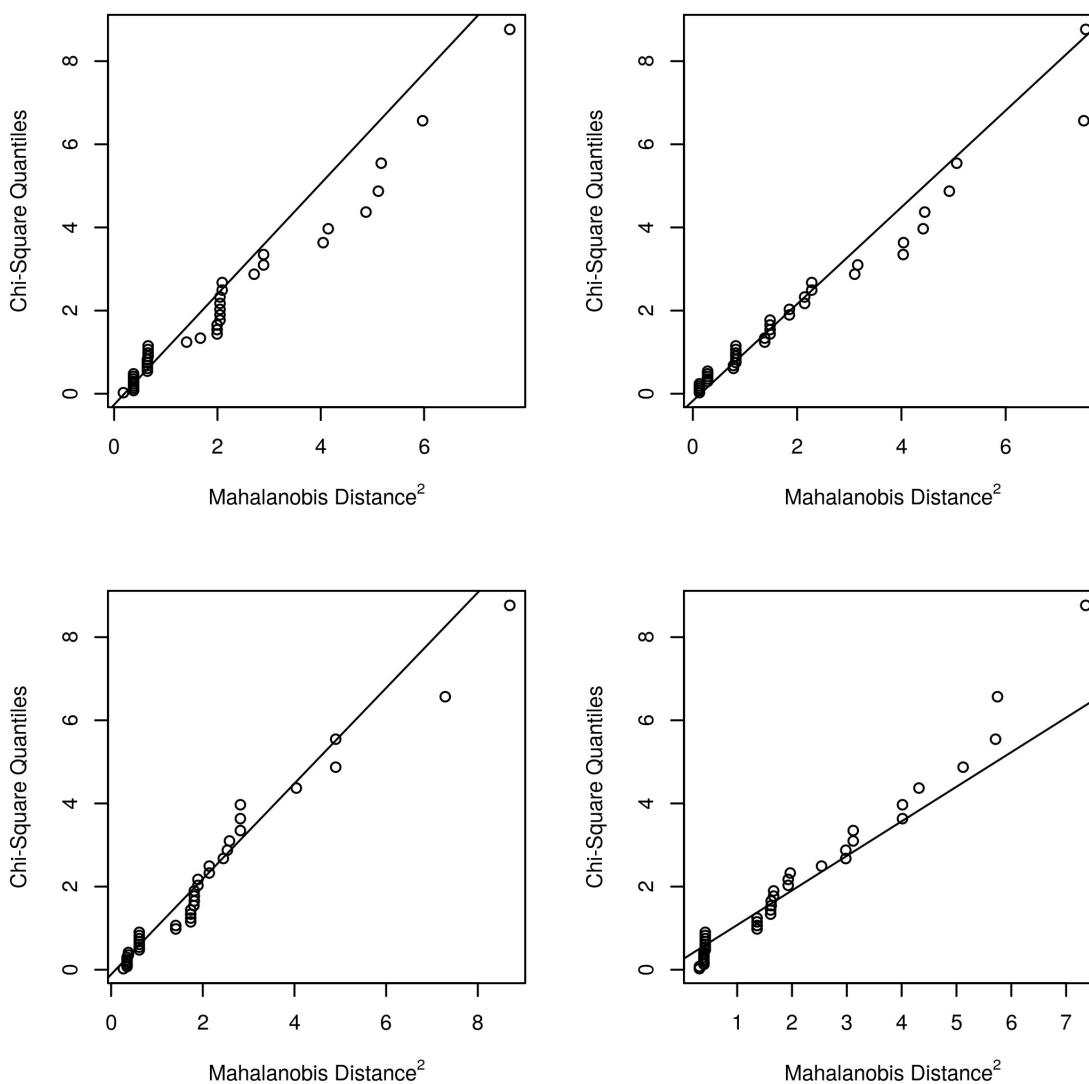
Figure E33

Chi-square Q-Q plot for squared Mahalanobis distances between Q5ChangeProducts and Q12PerformanceMetPrevious12Months (left), Q5ChangeProducts and Q13PerformanceMetPrevious60Months (right), Q6Reposition and Q7Profitable (left), Q6Reposition and Q8MoreMarketShare (right)

Figure E34

Chi-square Q-Q plot for squared Mahalanobis distances between Q6Reposition and Q9RapidGrowth (left), Q6Reposition and Q10PerformancePrevious12Months (right), Q6Reposition and Q11PerformancePrevious60Months (left), Q6Reposition and Q12PerformanceMetPrevious12Months (right)

Figure E35

Chi-square Q-Q plot for squared Mahalanobis distances between Q6Reposition and Q13PerformanceMetPrevious60Months (left), Q7Profitable and Q8MoreMarketShare (right), Q7Profitable and Q9RapidGrowth (left), Q7Profitable and Q10PerformancePrevious12Months (right)
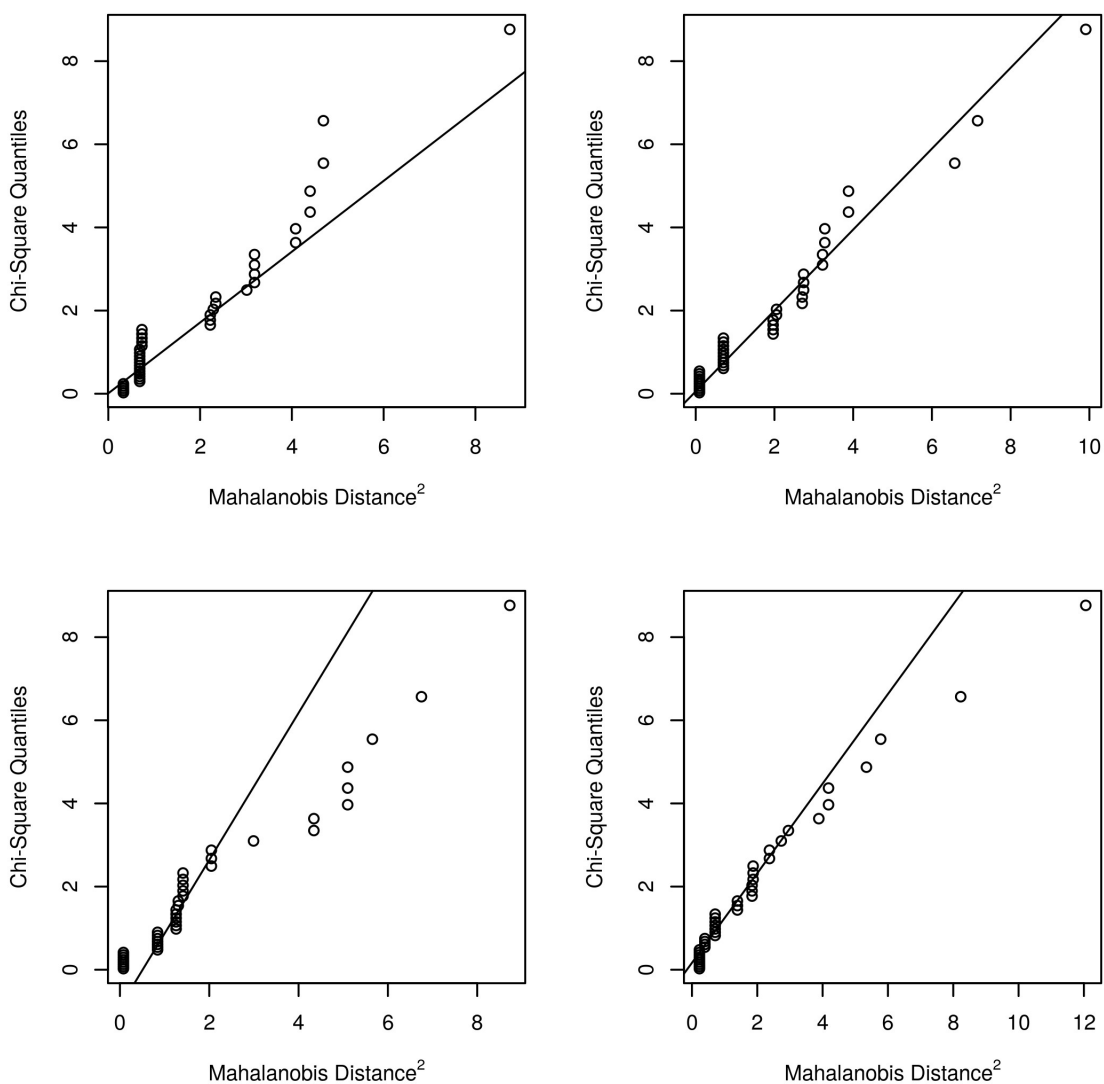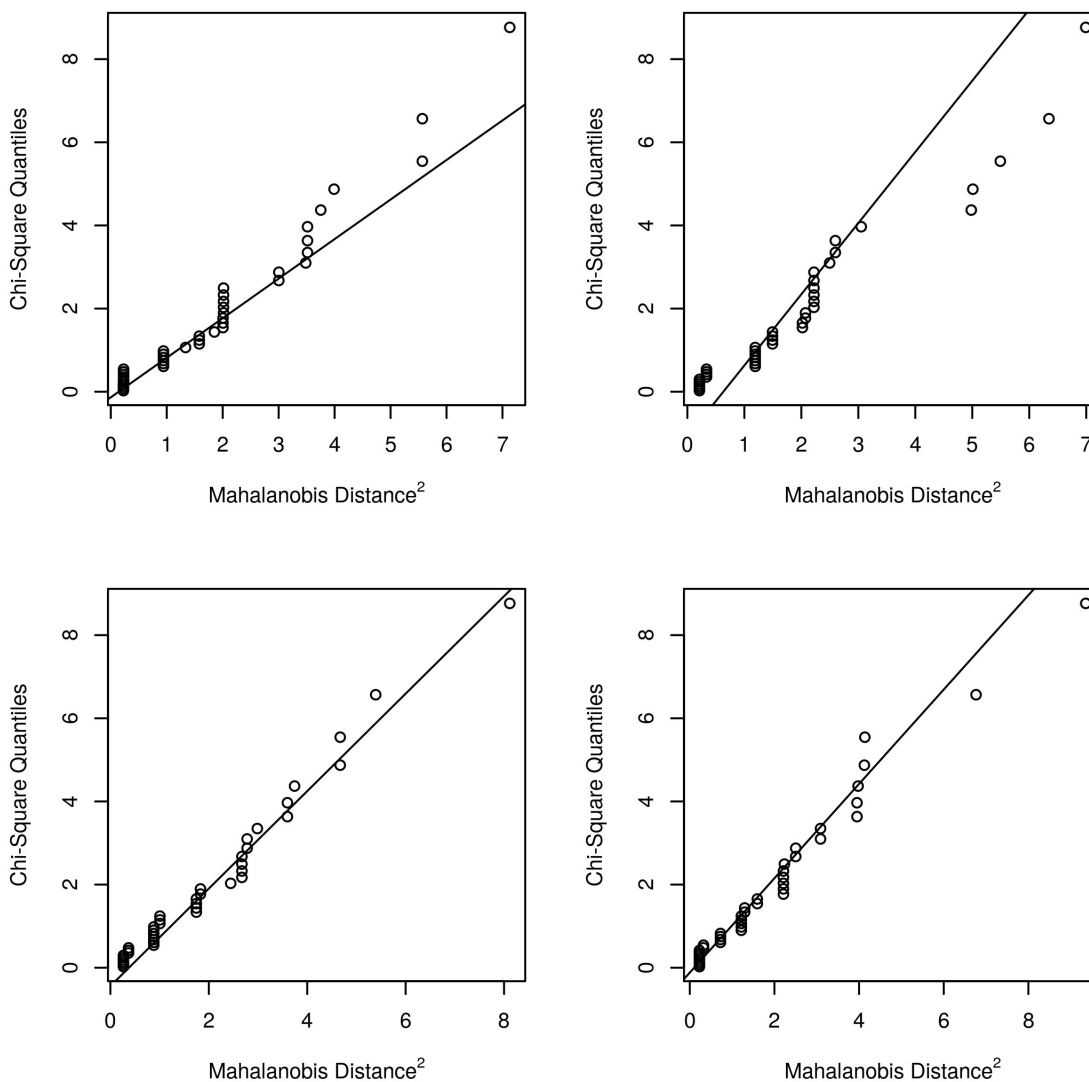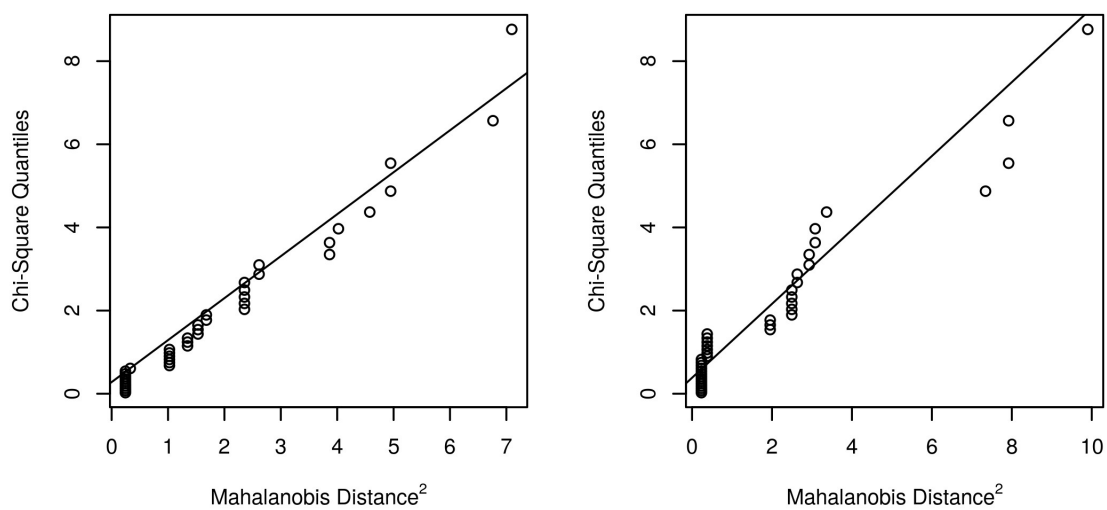
Figure E36

Chi-square Q-Q plot for squared Mahalanobis distances between Q7Profitable and

Q11PerformancePrevious60Months (left), Q7Profitable and

Q12PerformanceMetPrevious12Months (right), Q7Profitable and

Q13PerformanceMetPrevious60Months (left), Q8MoreMarketShare and

Q9RapidGrowth (right)

Figure E37

Chi-square Q-Q plot for squared Mahalanobis distances between Q8MoreMarketShare and Q10PerformancePrevious12Months (left), Q8MoreMarketShare and Q11PerformancePrevious60Months (right), Q8MoreMarketShare and Q12PerformanceMetPrevious12Months (left), Q8MoreMarketShare and Q13PerformanceMetPrevious60Months (right)
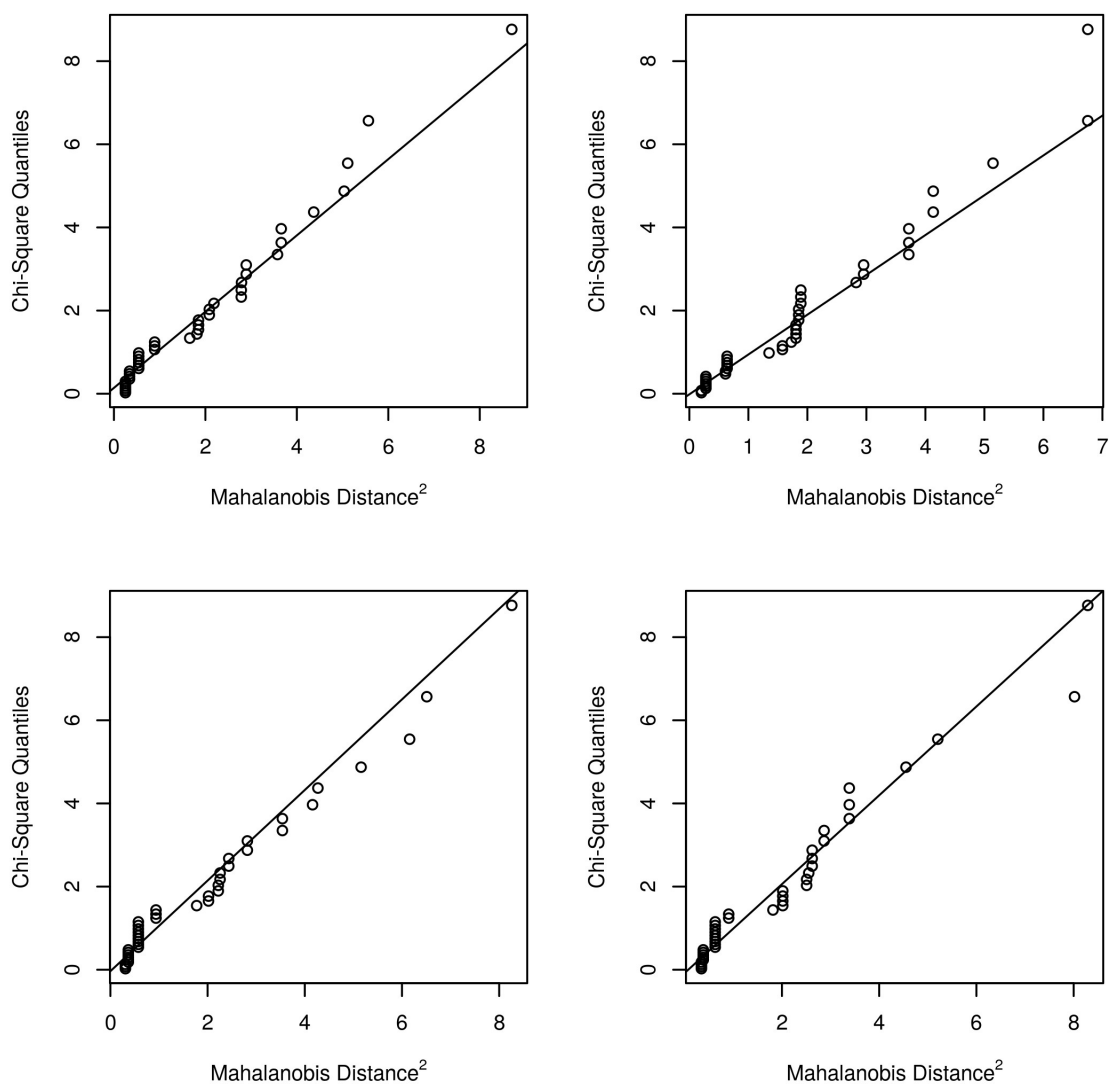
Figure E38

Chi-square Q-Q plot for squared Mahalanobis distances between Q9RapidGrowth and

Q10PerformancePrevious12Months (left), Q9RapidGrowth and

Q11PerformancePrevious60Months (right), Q9RapidGrowth and

Q12PerformanceMetPrevious12Months (left), Q9RapidGrowth and

Q13PerformanceMetPrevious60Months (right)
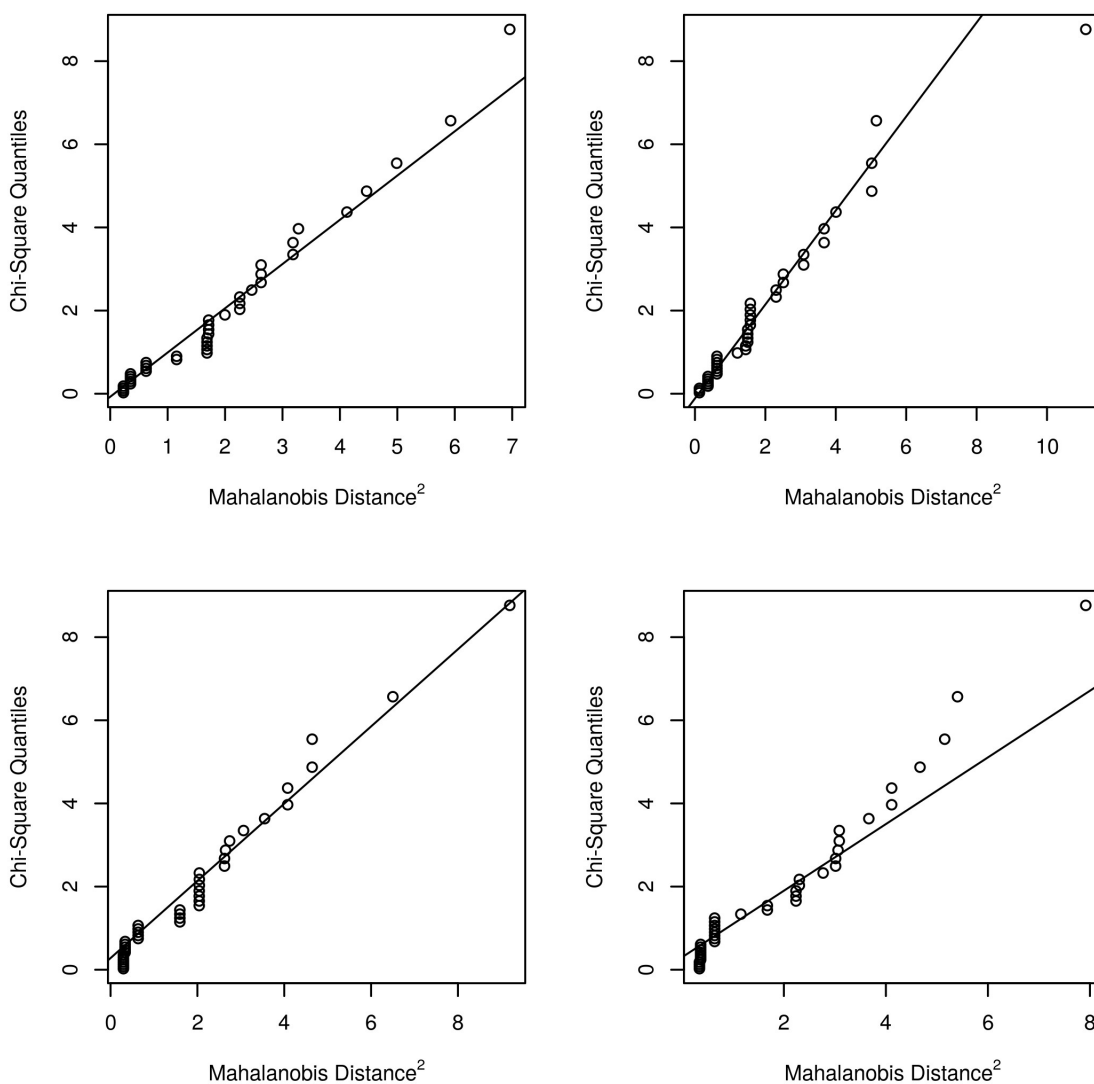
Figure E39

Chi-square Q-Q plot for squared Mahalanobis distances between

Q10PerformancePrevious12Months and Q11PerformancePrevious60Months (left),

Q10PerformancePrevious12Months and Q12PerformanceMetPrevious12Months (right),

Q10PerformancePrevious12Months and Q13PerformanceMetPrevious60Months (left),

*Q11PerformancePrevious60Months and Q12PerformanceMetPrevious12Months (right)*

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Figure E40

Chi-square Q-Q plot for squared Mahalanobis distances between

Q11PerformancePrevious60Months and Q13PerformanceMetPrevious60Months (left),

Q12PerformanceMetPrevious12Months and Q13PerformanceMetPrevious60Months

(right).

Figure E41

Scatterplots with the regression line added for Q1LaunchProducts and

Q2RangeOfProNotOffered (left), Q1LaunchProducts and Q3AddNewProducts (right),

Q1LaunchProducts and Q4ImproveProducts (left), Q1LaunchProducts and
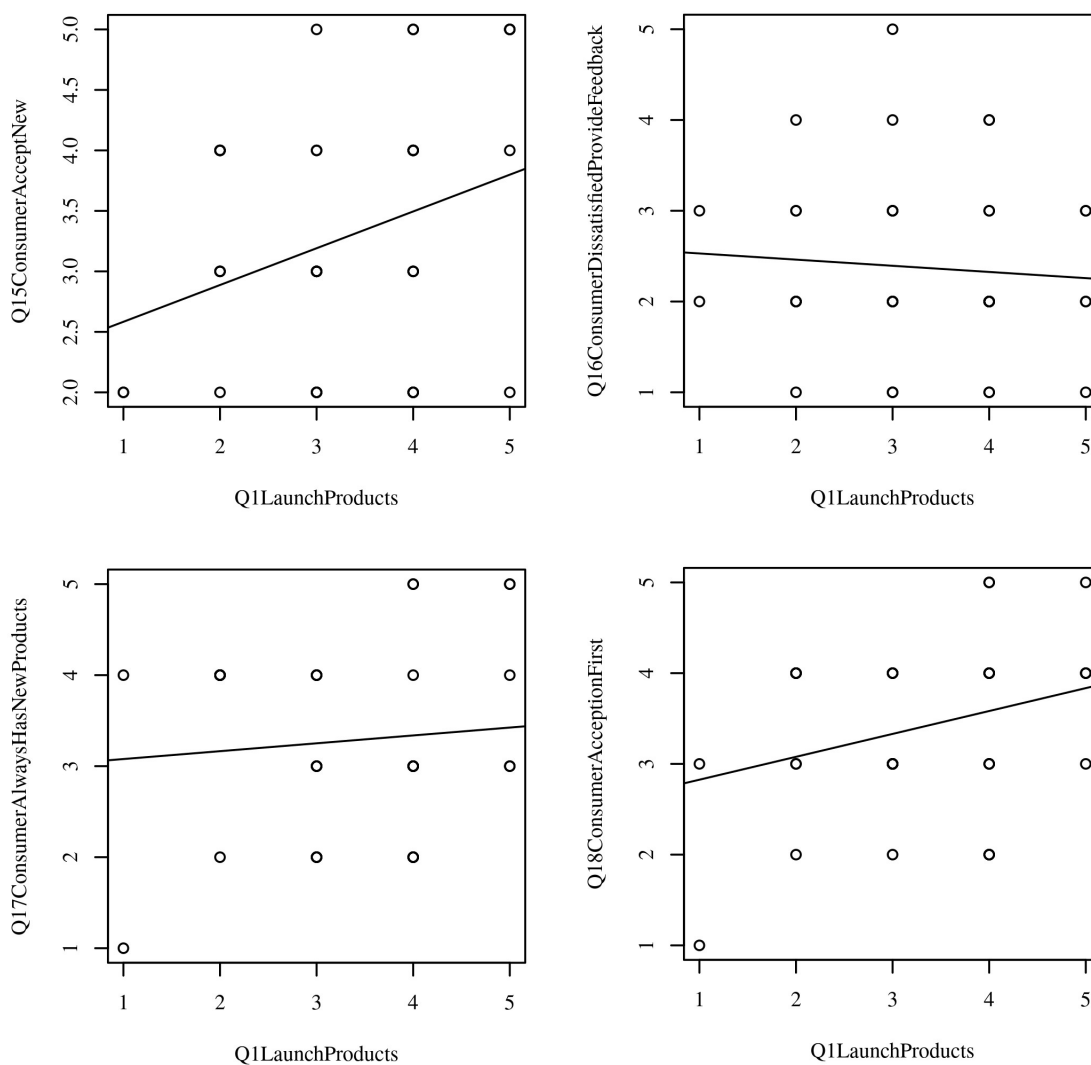
Q5ChangeProducts (right).s
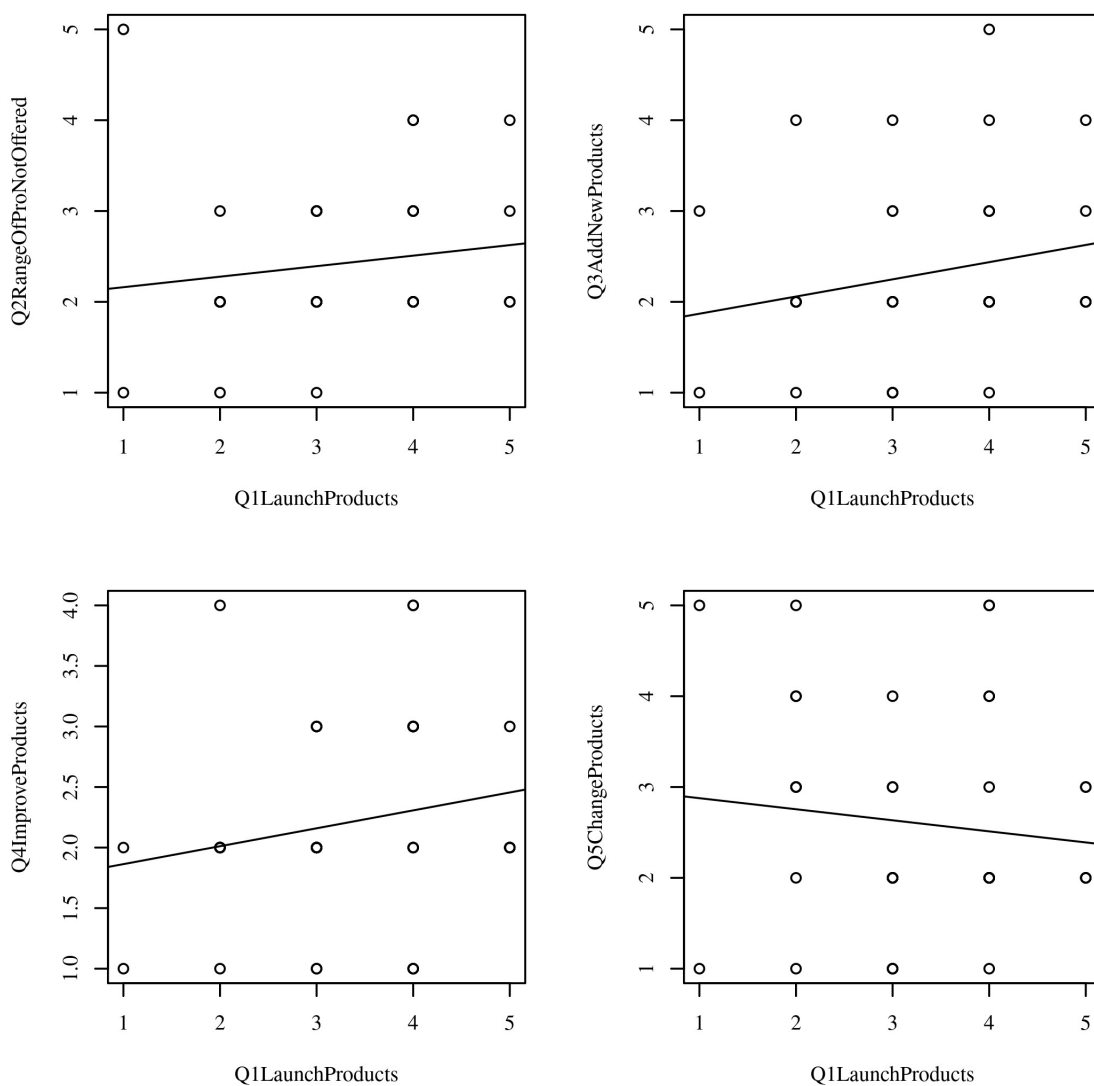
Figure E42

Scatterplots with the regression line added for Q1LaunchProducts and

Q15ConsumerAcceptNew (left), Q1LaunchProducts and

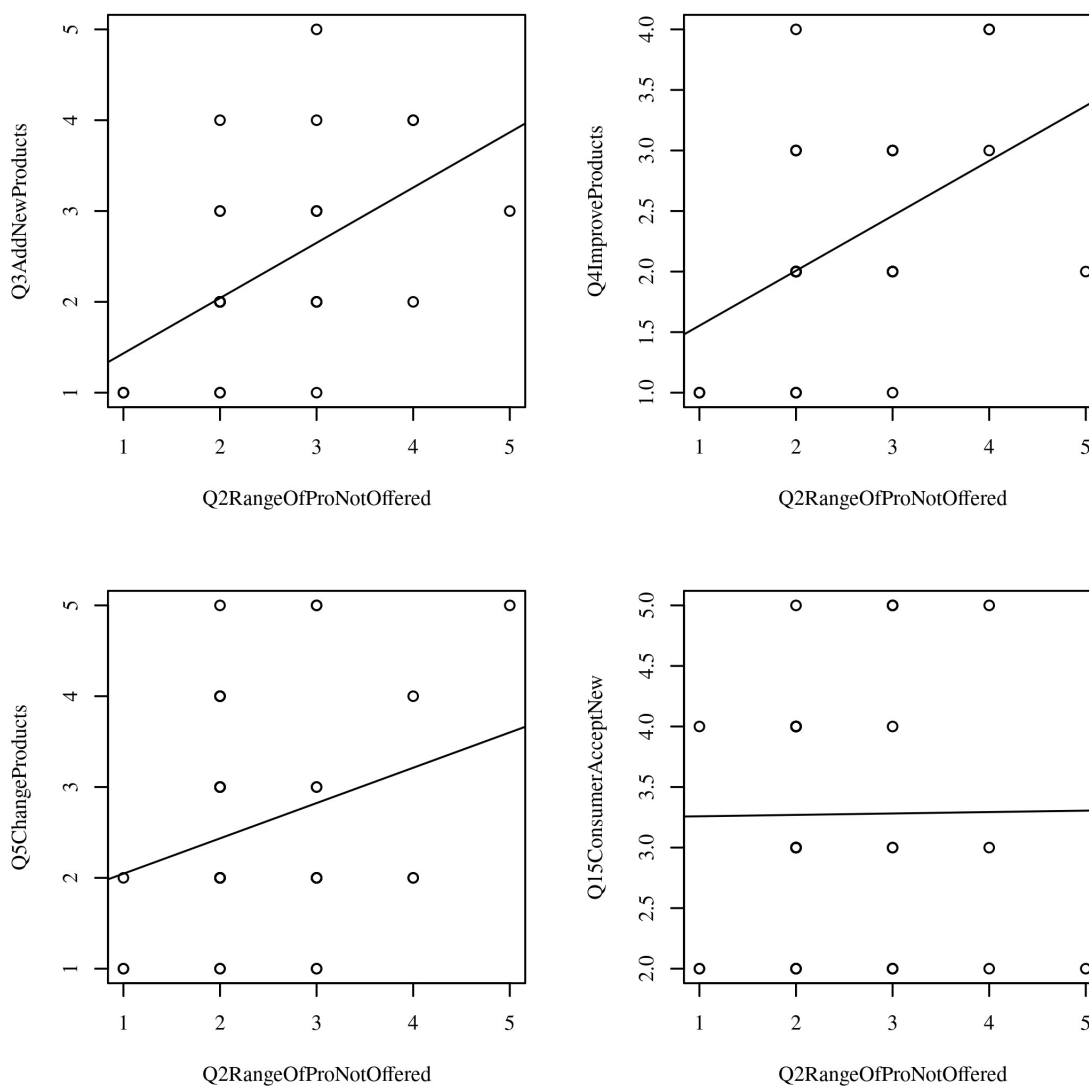*Q16ConsumerDissatisfiedProvideFeedback (right), Q1LaunchProducts and*

Q17ConsumerAlwaysHasNewProducts (left), Q1LaunchProducts and
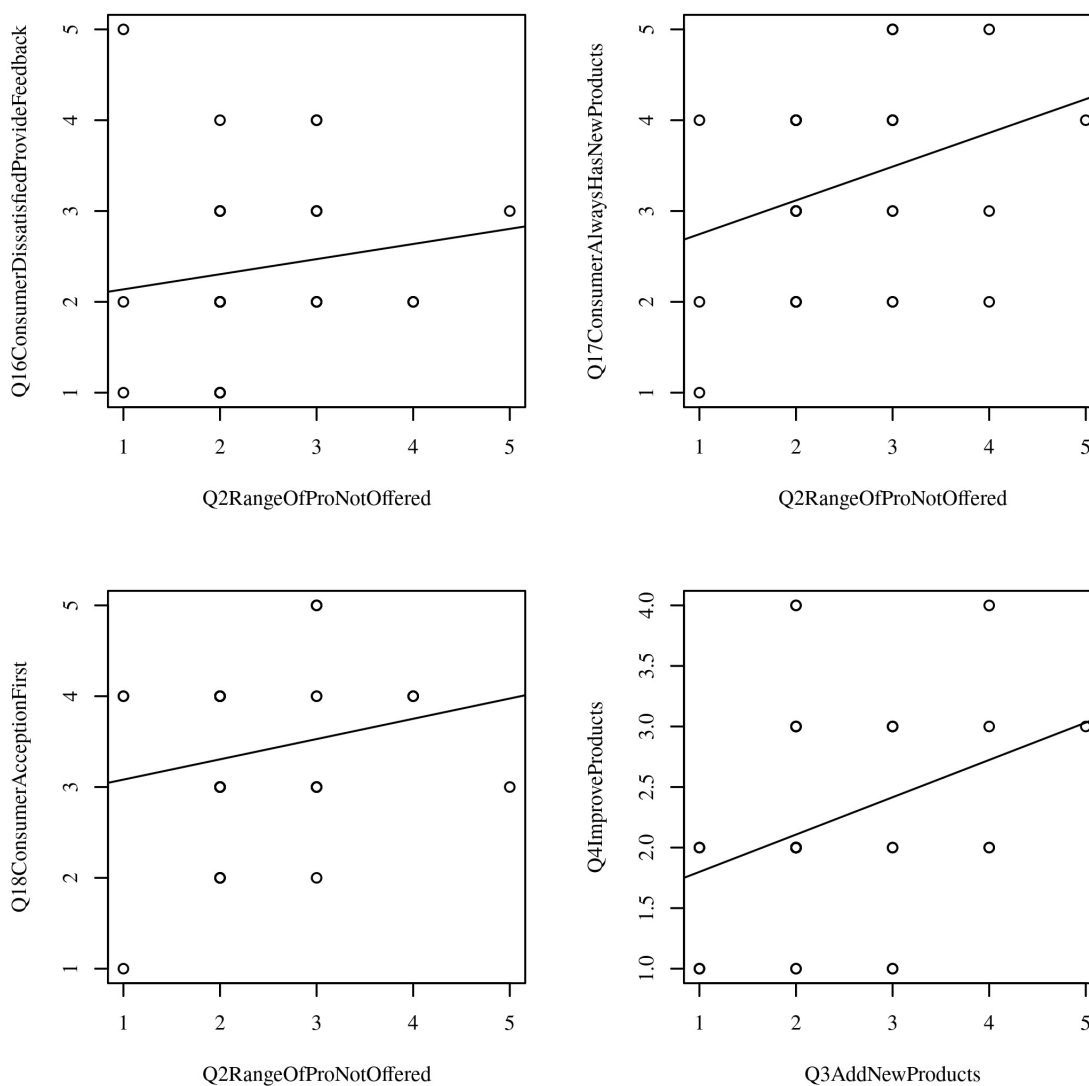
Q18ConsumerAcceptionFirst (right)

Figure E43

Scatterplots with the regression line added for Q2RangeOfProNotOffered and

Q3AddNewProducts (left), Q2RangeOfProNotOffered and Q4ImproveProducts (right),

Q2RangeOfProNotOffered and Q5ChangeProducts (left), Q2RangeOfProNotOffered and
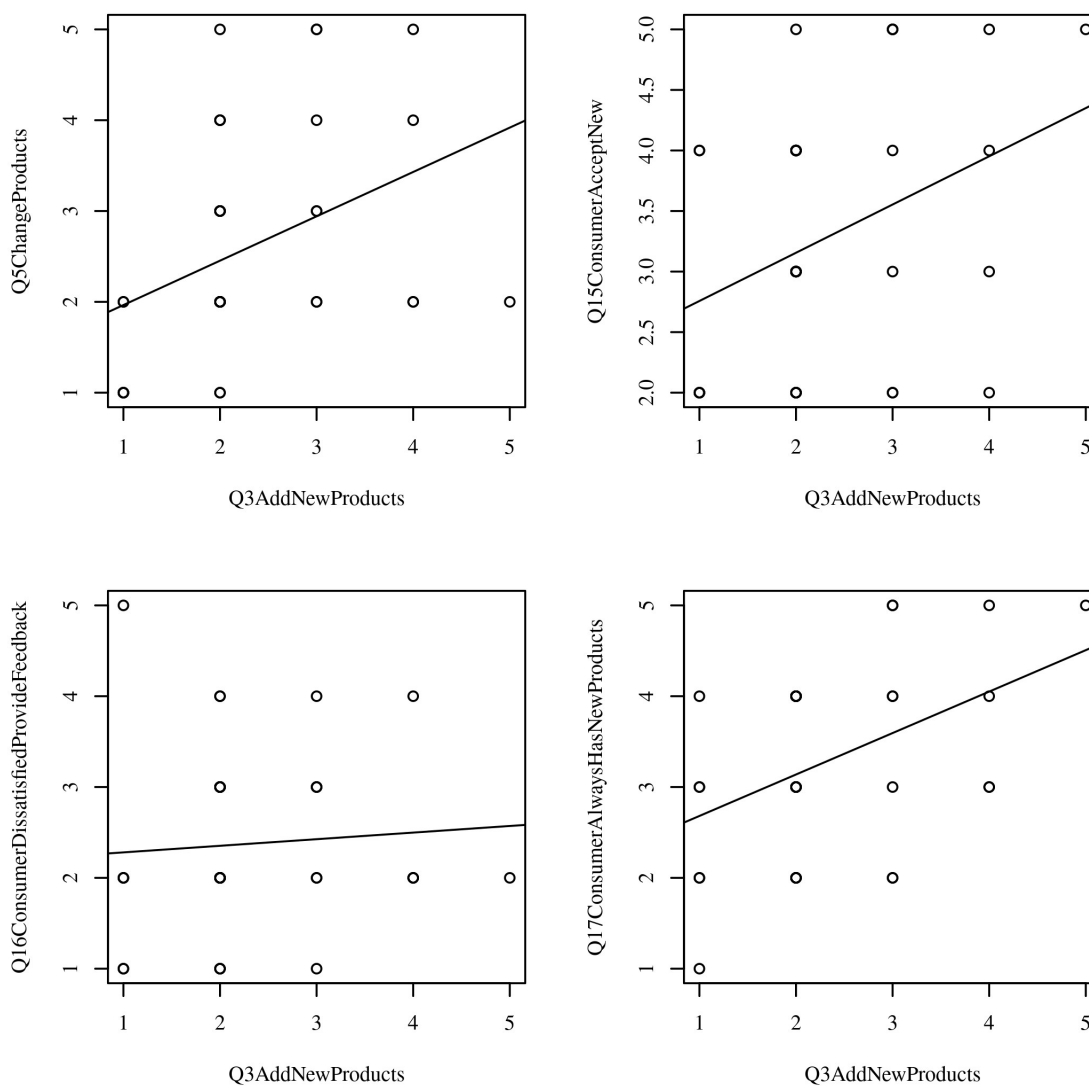
Q15ConsumerAcceptNew (right)

Figure E44

Scatterplots with the regression line added for Q2RangeOfProNotOffered and

Q16ConsumerDissatisfiedProvideFeedback (left), Q2RangeOfProNotOffered and

Q17ConsumerAlwaysHasNewProducts (right), Q2RangeOfProNotOffered and

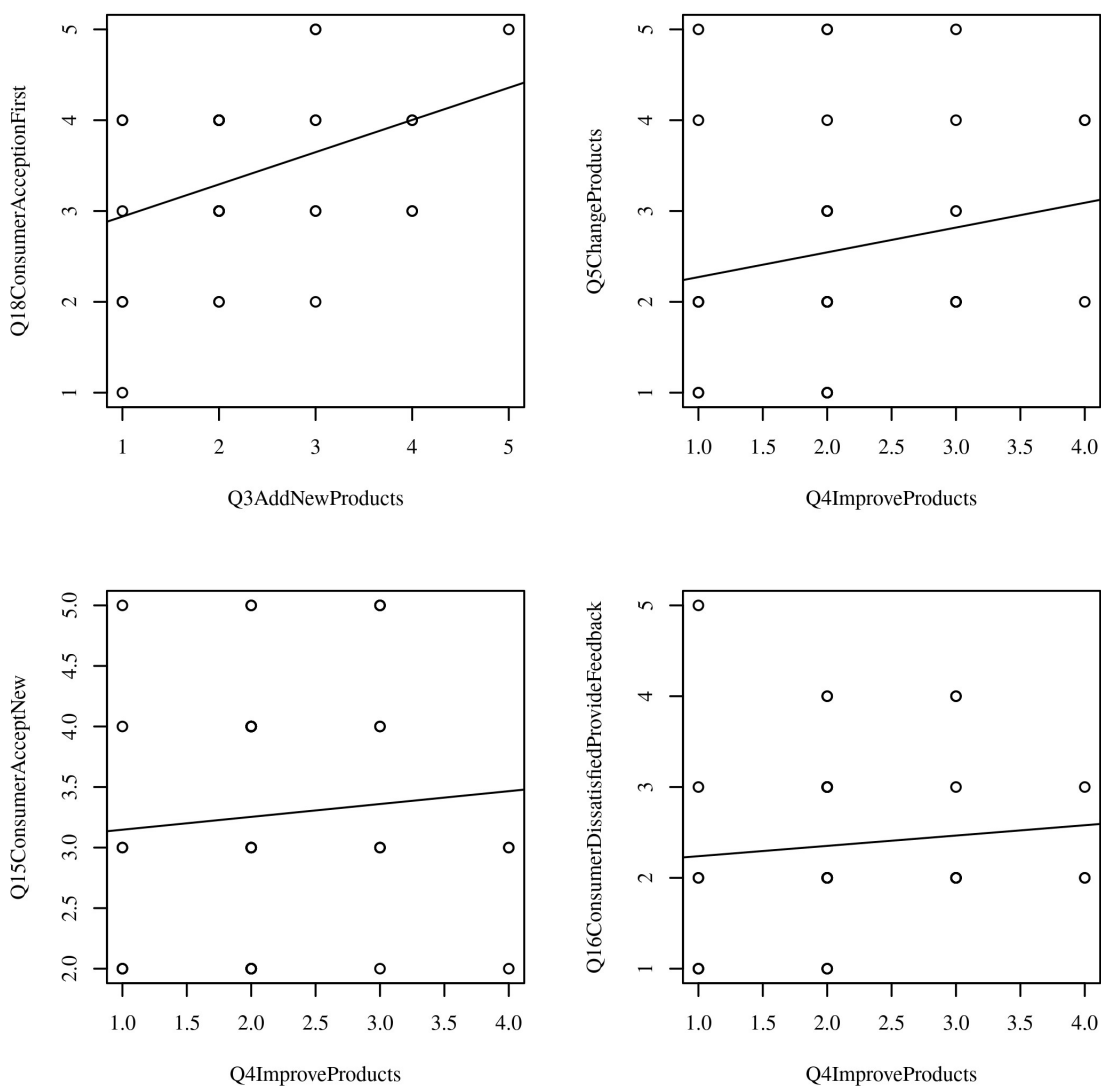*Q18ConsumerAcceptionFirst (left), Q3AddNewProducts and Q4ImproveProducts (right)*

Figure E45

Scatterplots with the regression line added for Q3AddNewProducts and

Q5ChangeProducts (left), Q3AddNewProducts and Q15ConsumerAcceptNew (right),

Q3AddNewProducts and Q16ConsumerDissatisfiedProvideFeedback (left),

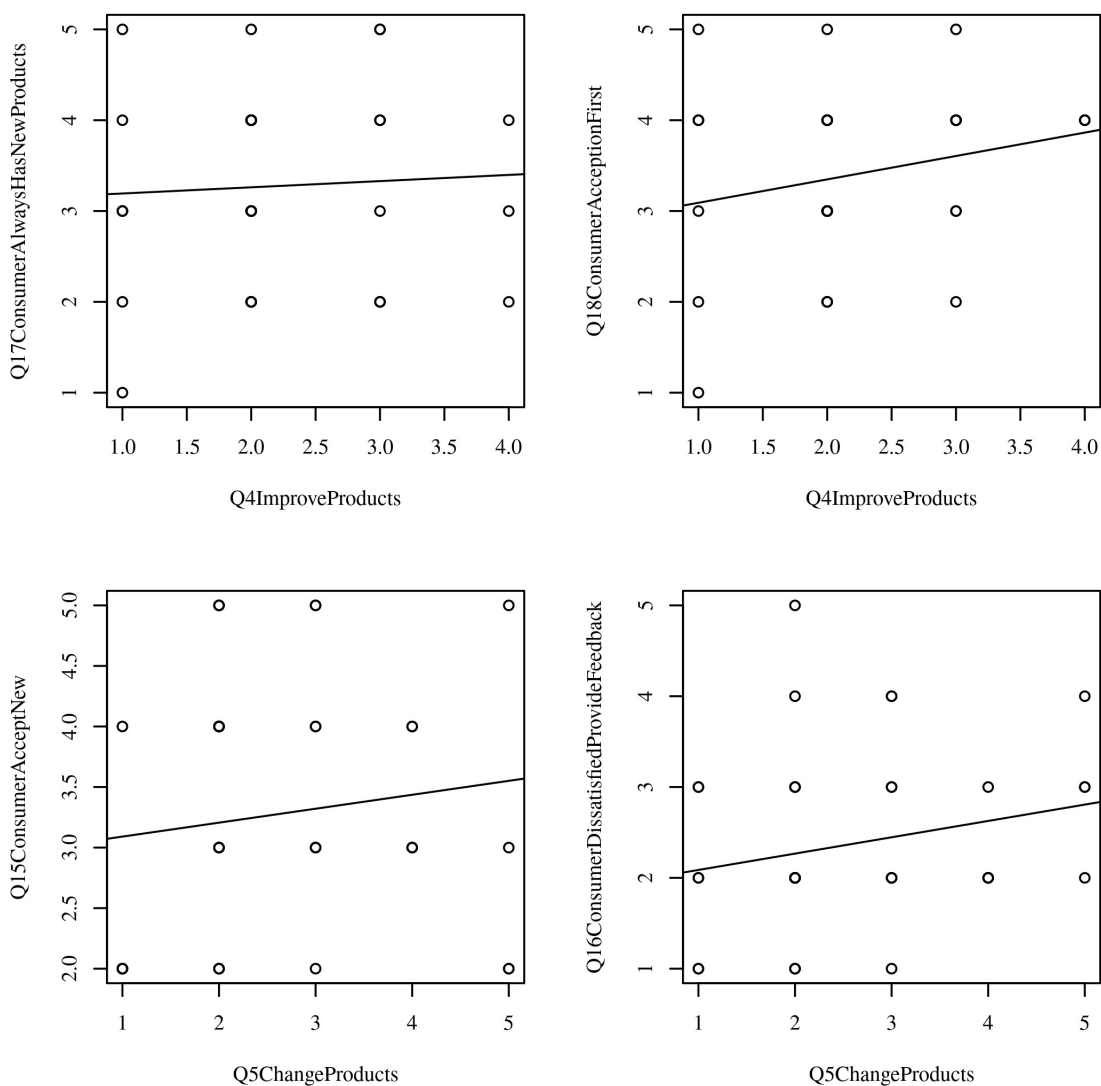*Q3AddNewProducts and Q17ConsumerAlwaysHasNewProducts (right)*

Figure E46

Scatterplots with the regression line added for Q3AddNewProducts and Q18ConsumerAcceptionFirst (left), Q4ImproveProducts and Q5ChangeProducts (right), Q4ImproveProducts and Q15ConsumerAcceptNew (left), Q4ImproveProducts and Q16ConsumerDissatisfiedProvideFeedback (right)
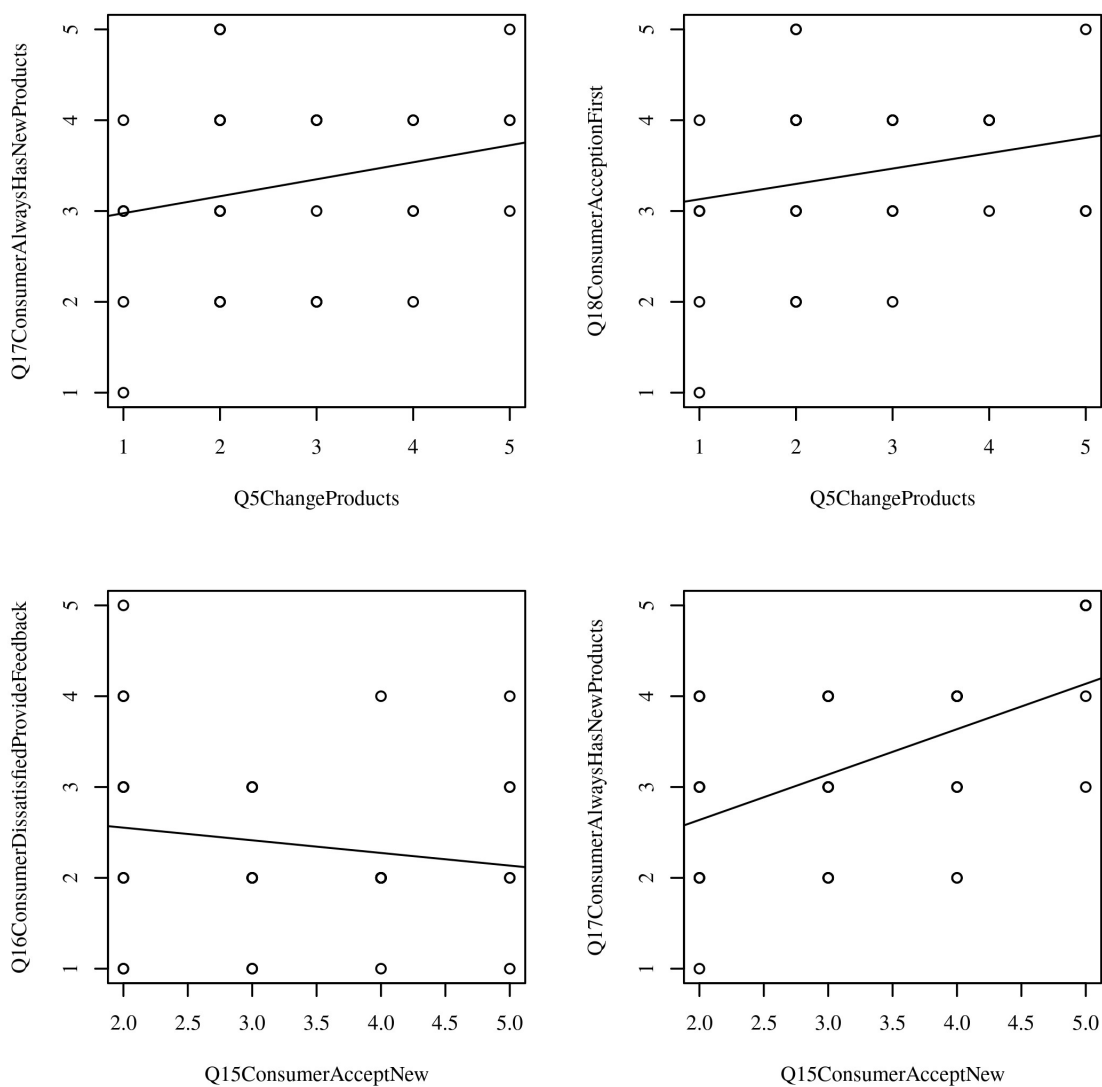
Figure E47

Scatterplots with the regression line added for Q4ImproveProducts and

Q17ConsumerAlwaysHasNewProducts (left), Q4ImproveProducts and

Q18ConsumerAcceptionFirst (right), Q5ChangeProducts and Q15ConsumerAcceptNew

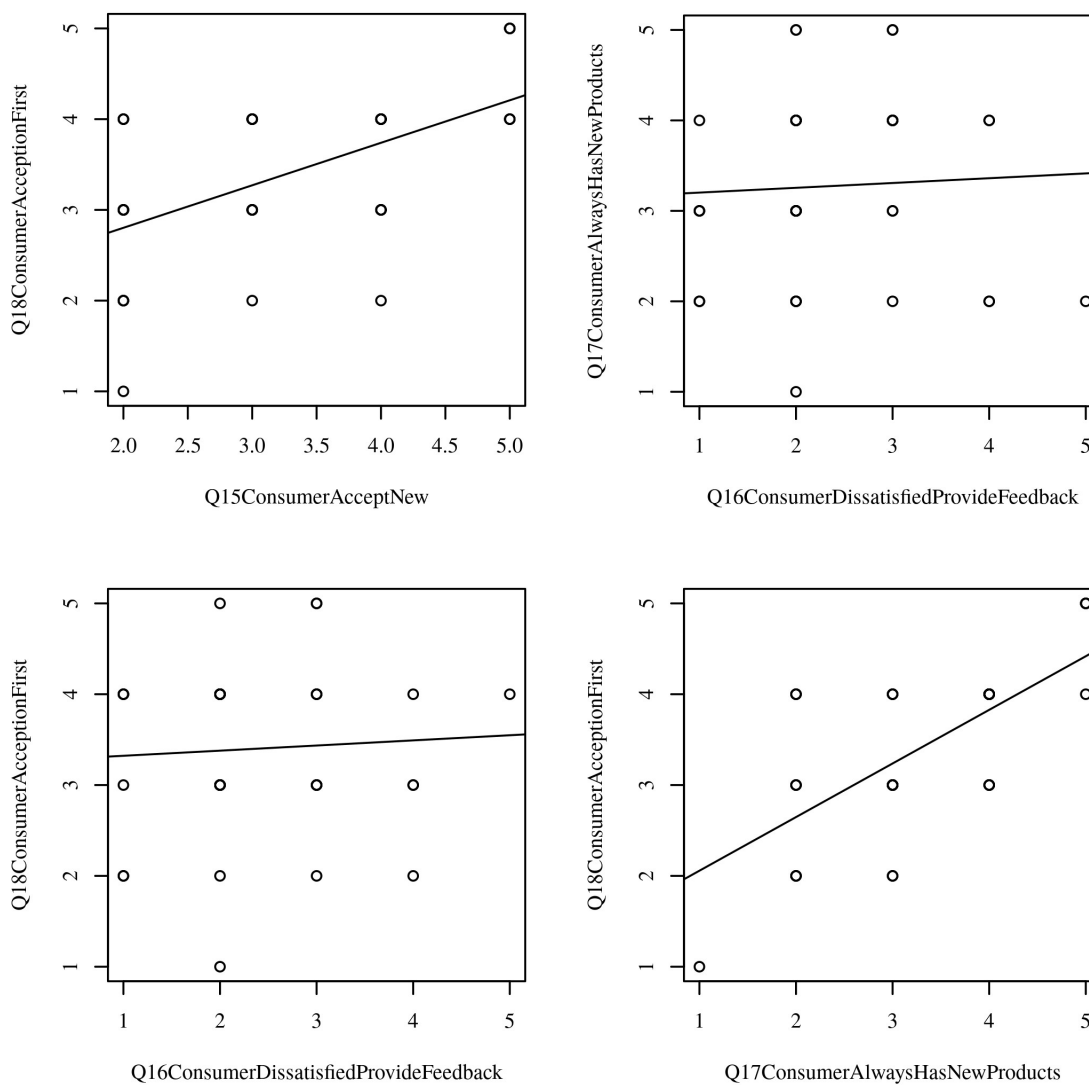*(left), Q5ChangeProducts and Q16ConsumerDissatisfiedProvideFeedback (right)*

Figure E48

Scatterplots with the regression line added for Q5ChangeProducts and

Q17ConsumerAlwaysHasNewProducts (left), Q5ChangeProducts and

Q18ConsumerAcceptionFirst (right), Q15ConsumerAcceptNew and

Q16ConsumerDissatisfiedProvideFeedback (left), Q15ConsumerAcceptNew and
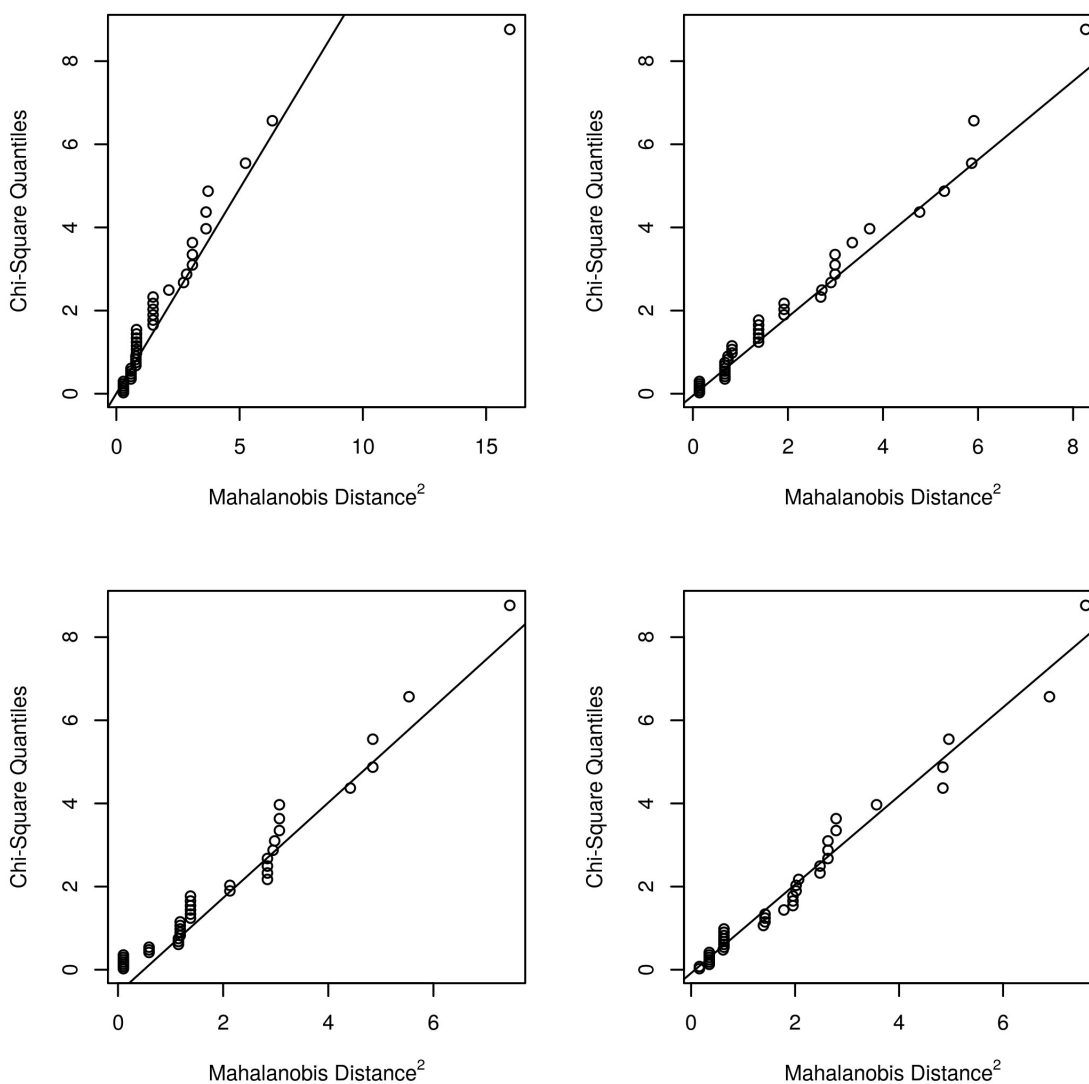
Q17ConsumerAlwaysHasNewProducts (right)

Figure E49

Scatterplots with the regression line added for Q15ConsumerAcceptNew and

Q18ConsumerAcceptionFirst (left), Q16ConsumerDissatisfiedProvideFeedback and

Q17ConsumerAlwaysHasNewProducts (right), Q18ConsumerAcceptionFirst (left),

Q17ConsumerAlwaysHasNewProducts and Q18ConsumerAcceptionFirst (right)
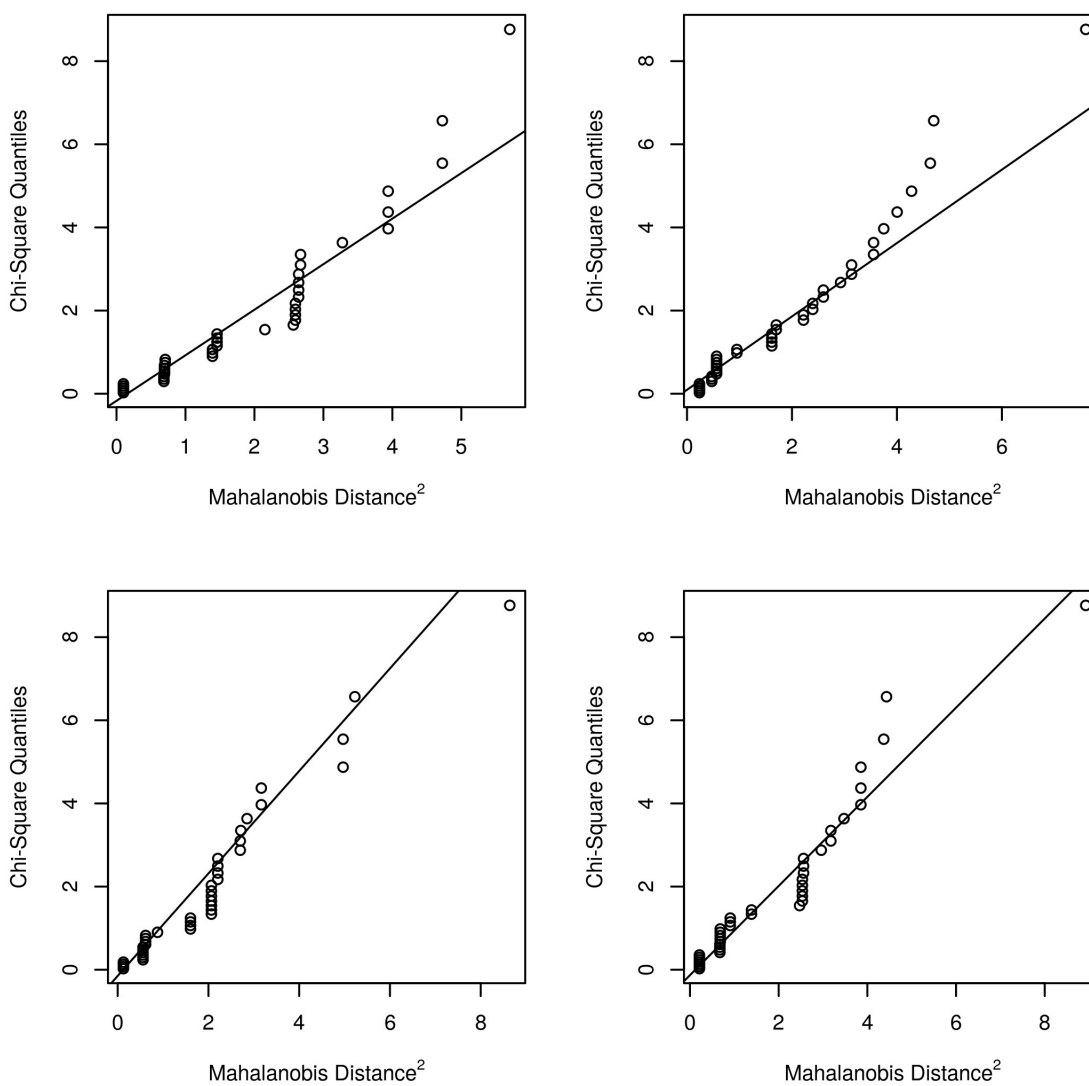
Figure E50

Chi-square Q-Q plot for squared Mahalanobis distances between Q1LaunchProducts and Q2RangeOfProNotOffered (left), Q1LaunchProducts and Q3AddNewProducts (right), Q1LaunchProducts and Q4ImproveProducts (left), Q1LaunchProducts and Q5ChangeProducts (right)

Figure E51

Chi-square Q-Q plot for squared Mahalanobis distances between Q1LaunchProducts and Q15ConsumerAcceptNew (left), Q1LaunchProducts and Q16ConsumerDissatisfiedProvideFeedback (right), Q1LaunchProducts and Q17ConsumerAlwaysHasNewProducts (left), Q1LaunchProducts and Q18ConsumerAcceptionFirst (right)

Figure E52

Chi-square Q-Q plot for squared Mahalanobis distances between Q2RangeOfProNotOffered and Q3AddNewProducts (left), Q2RangeOfProNotOffered and Q4ImproveProducts (right), Q2RangeOfProNotOffered and Q5ChangeProducts (left), Q2RangeOfProNotOffered and Q15ConsumerAcceptNew (right)

Figure E53

Chi-square Q-Q plot for squared Mahalanobis distances between

Q2RangeOfProNotOffered and Q16ConsumerDissatisfiedProvideFeedback (left),

Q2RangeOfProNotOffered and Q17ConsumerAlwaysHasNewProducts (right),

Q2RangeOfProNotOffered and Q18ConsumerAcceptionFirst (left), Q3AddNewProducts
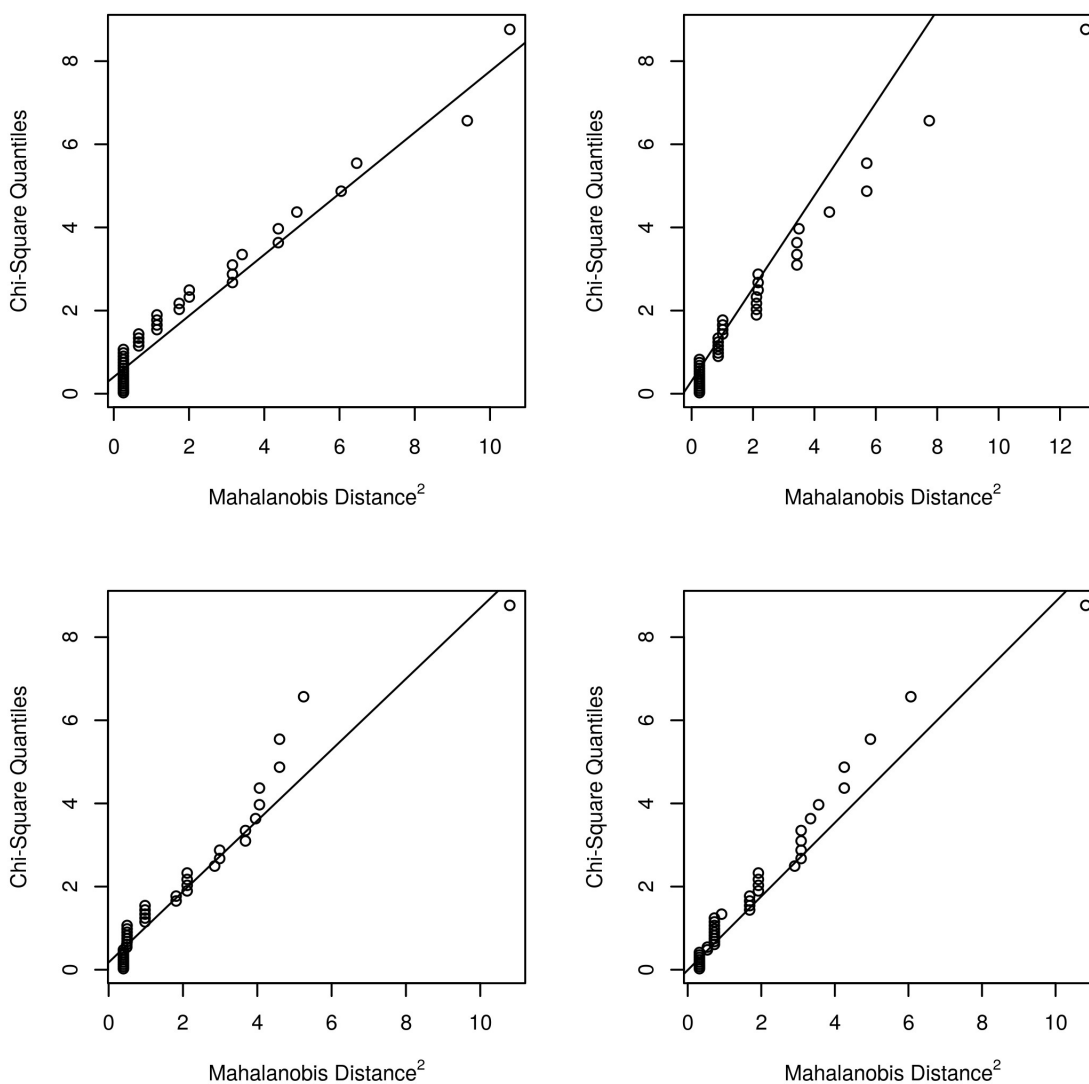
and Q4ImproveProducts (right)

183
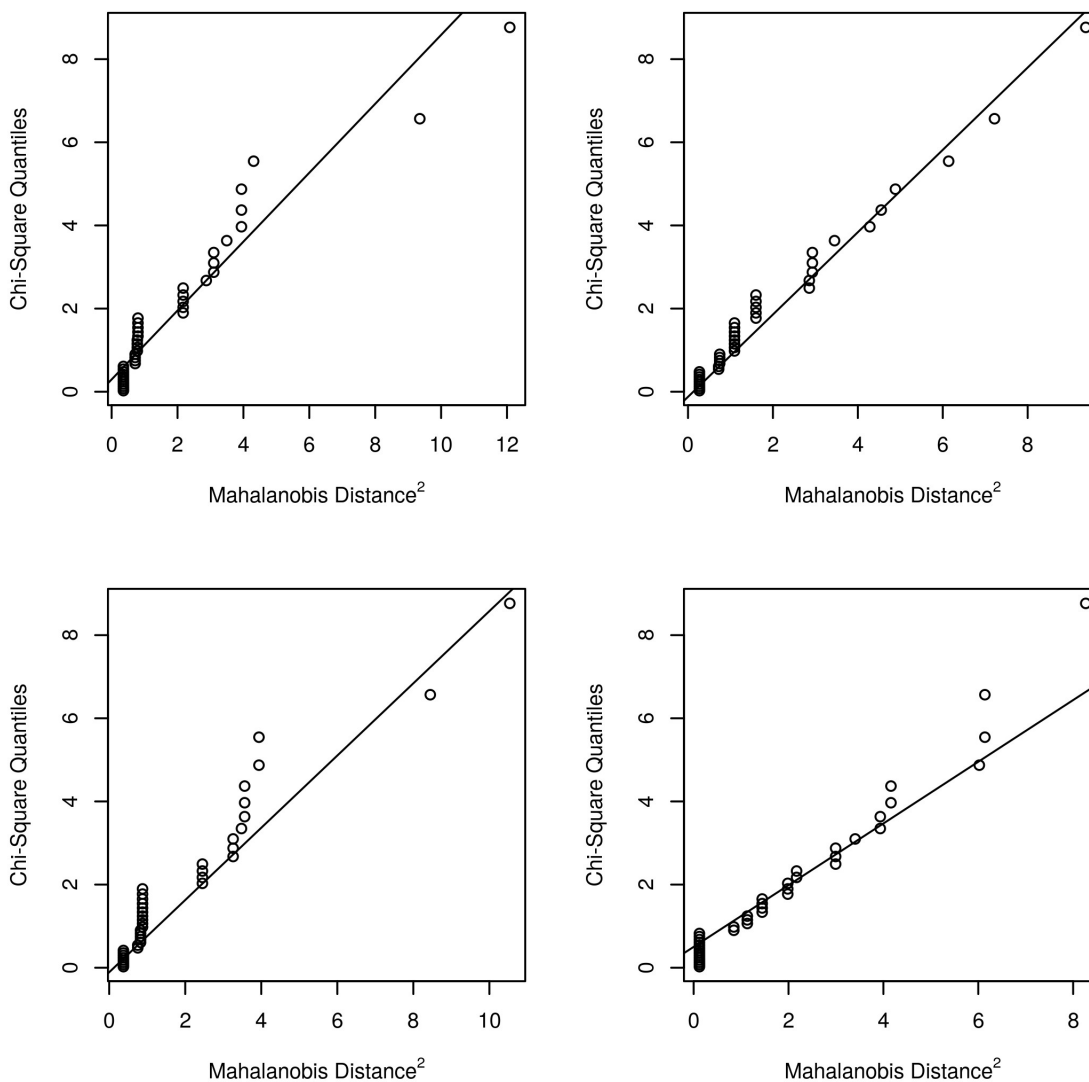
Figure E54

Chi-square Q-Q plot for squared Mahalanobis distances between Q3AddNewProducts

and Q5ChangeProducts (left), Q3AddNewProducts and Q15ConsumerAcceptNew

(right), Q3AddNewProducts and Q16ConsumerDissatisfiedProvideFeedback (left),
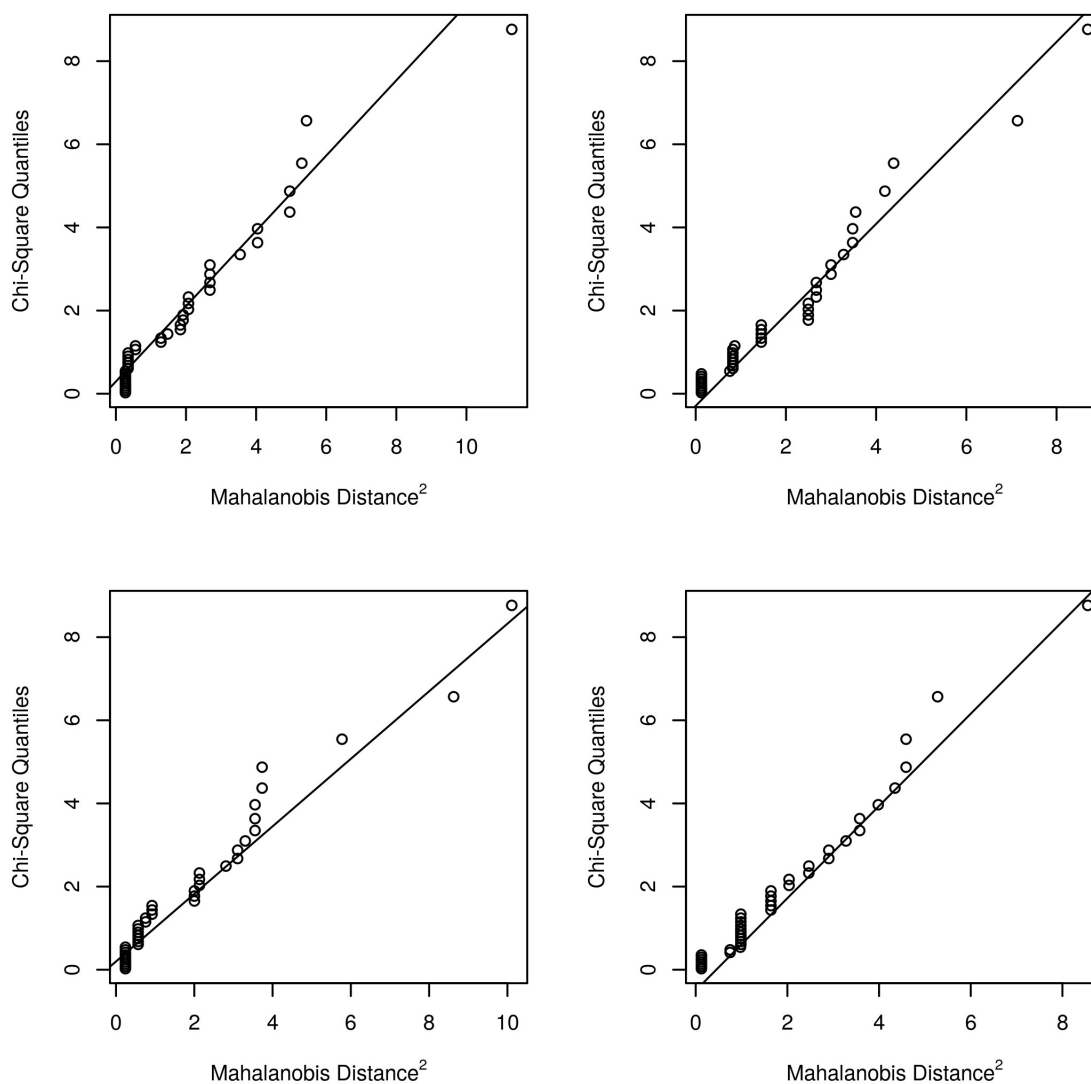
Q3AddNewProducts and Q17ConsumerAlwaysHasNewProducts (right)

Figure E55

Chi-square Q-Q plot for squared Mahalanobis distances between Q3AddNewProducts and Q18ConsumerAcceptionFirst (left), Q4ImproveProducts and Q5ChangeProducts (right), Q4ImproveProducts and Q15ConsumerAcceptNew (left), Q4ImproveProducts and Q16ConsumerDissatisfiedProvideFeedback (right)
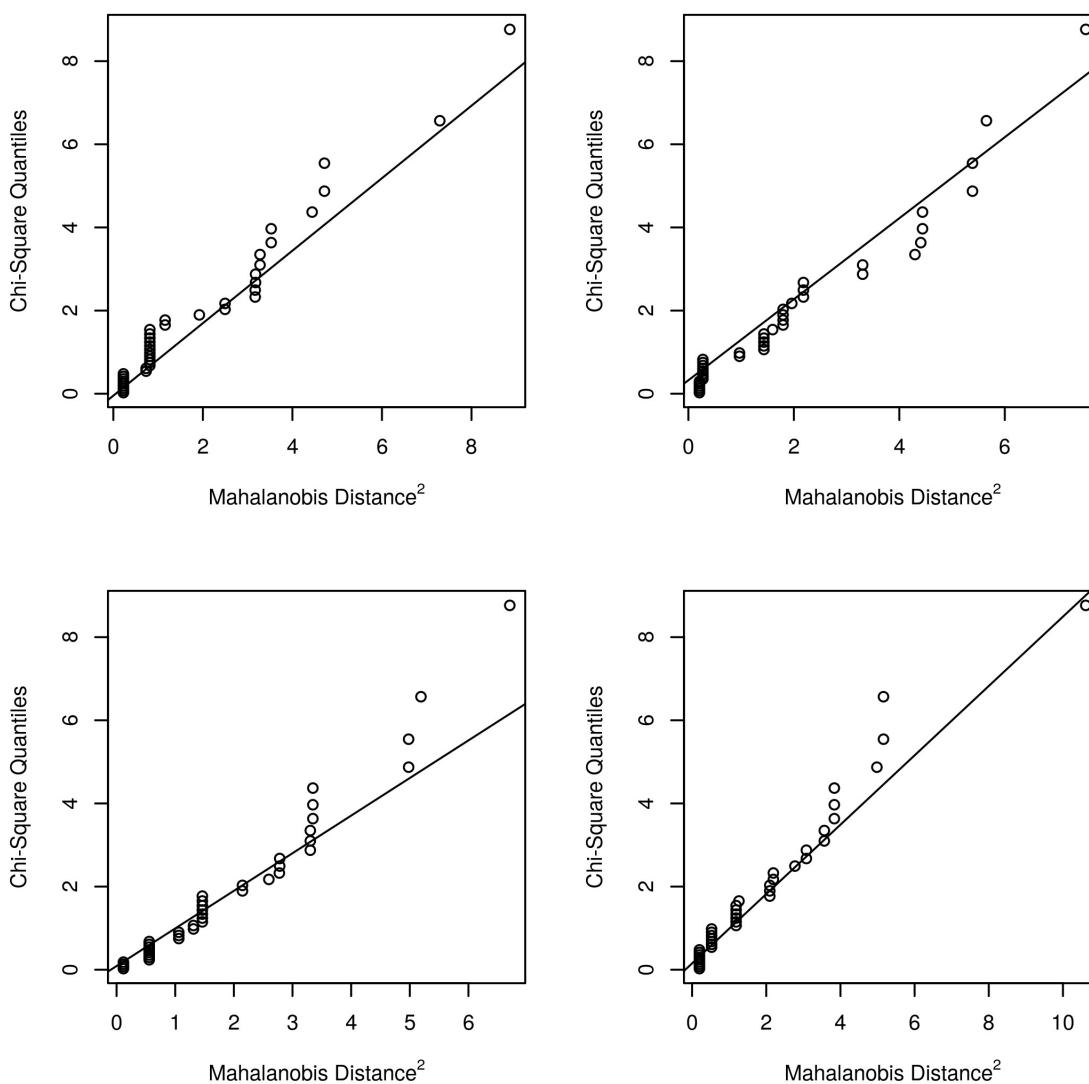
Figure E56

Chi-square Q-Q plot for squared Mahalanobis distances between Q4ImproveProducts

and Q17ConsumerAlwaysHasNewProducts (left), Q4ImproveProducts and

Q18ConsumerAcceptionFirst (right), Q5ChangeProducts and Q15ConsumerAcceptNew

(left), Q5ChangeProducts and Q16ConsumerDissatisfiedProvideFeedback (right)
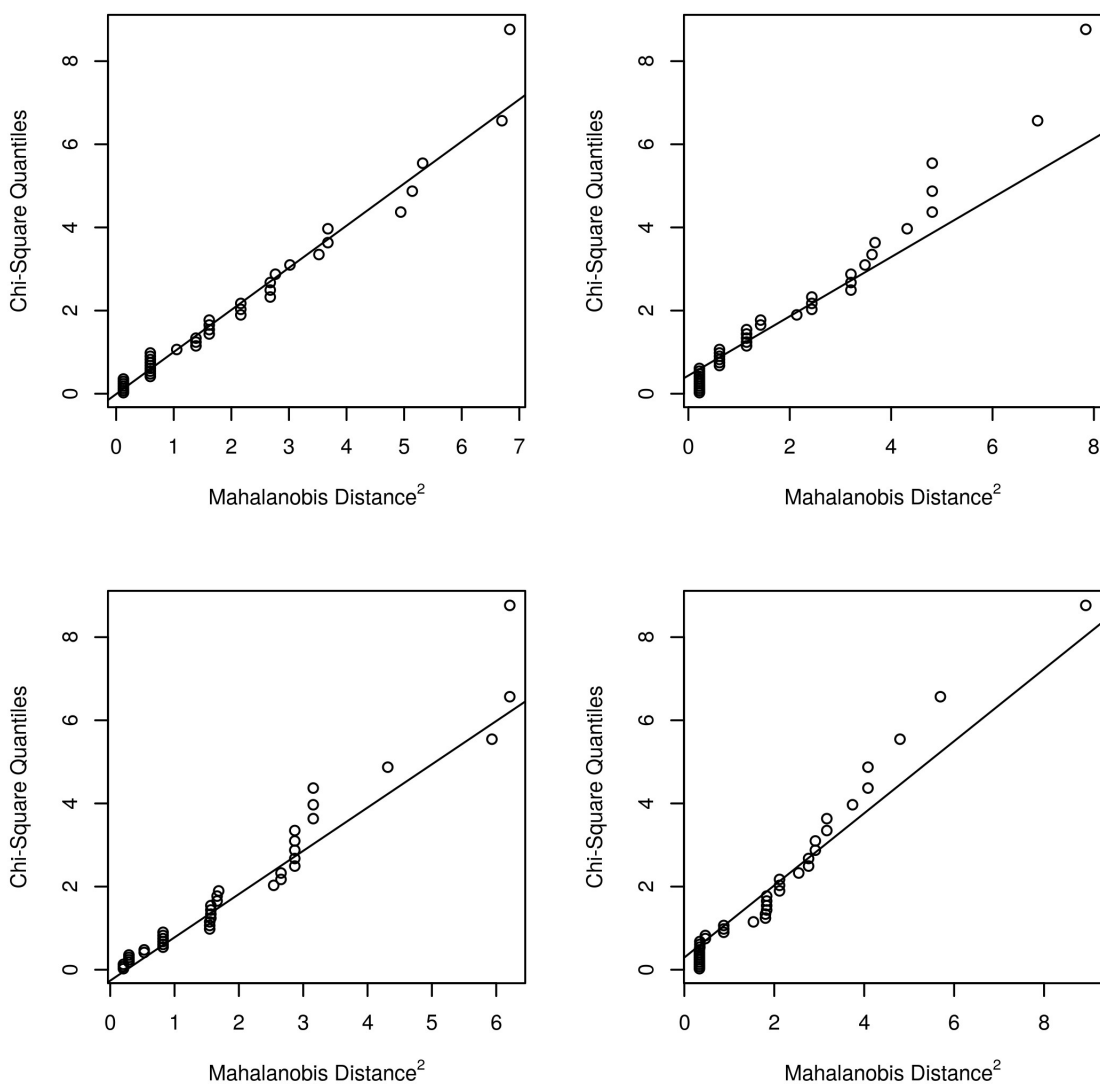
Figure E57

Chi-square Q-Q plot for squared Mahalanobis distances between Q5ChangeProducts

and Q17ConsumerAlwaysHasNewProducts (left), Q5ChangeProducts and

Q18ConsumerAcceptionFirst (right), Q15ConsumerAcceptNew and

Q16ConsumerDissatisfiedProvideFeedback (left), Q15ConsumerAcceptNew and

Q17ConsumerAlwaysHasNewProducts (right)
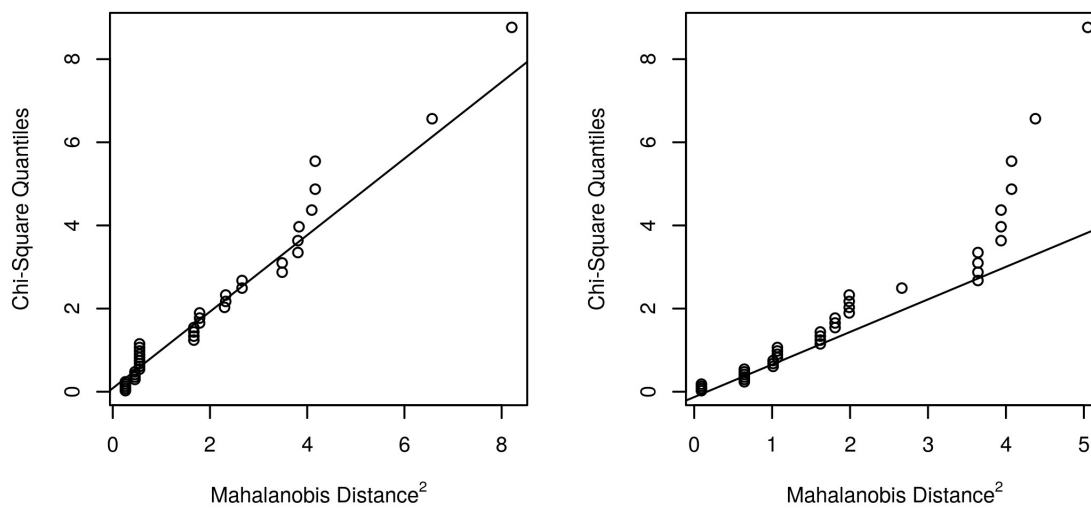
Figure E58

Chi-square Q-Q plot for squared Mahalanobis distances between

Q15ConsumerAcceptNew and Q18ConsumerAcceptionFirst (left),

Q16ConsumerDissatisfiedProvideFeedback and Q17ConsumerAlwaysHasNewProducts

(right), Q16ConsumerDissatisfiedProvideFeedback and Q18ConsumerAcceptionFirst

(left), Q17ConsumerAlwaysHasNewProducts and Q18ConsumerAcceptionFirst (right)
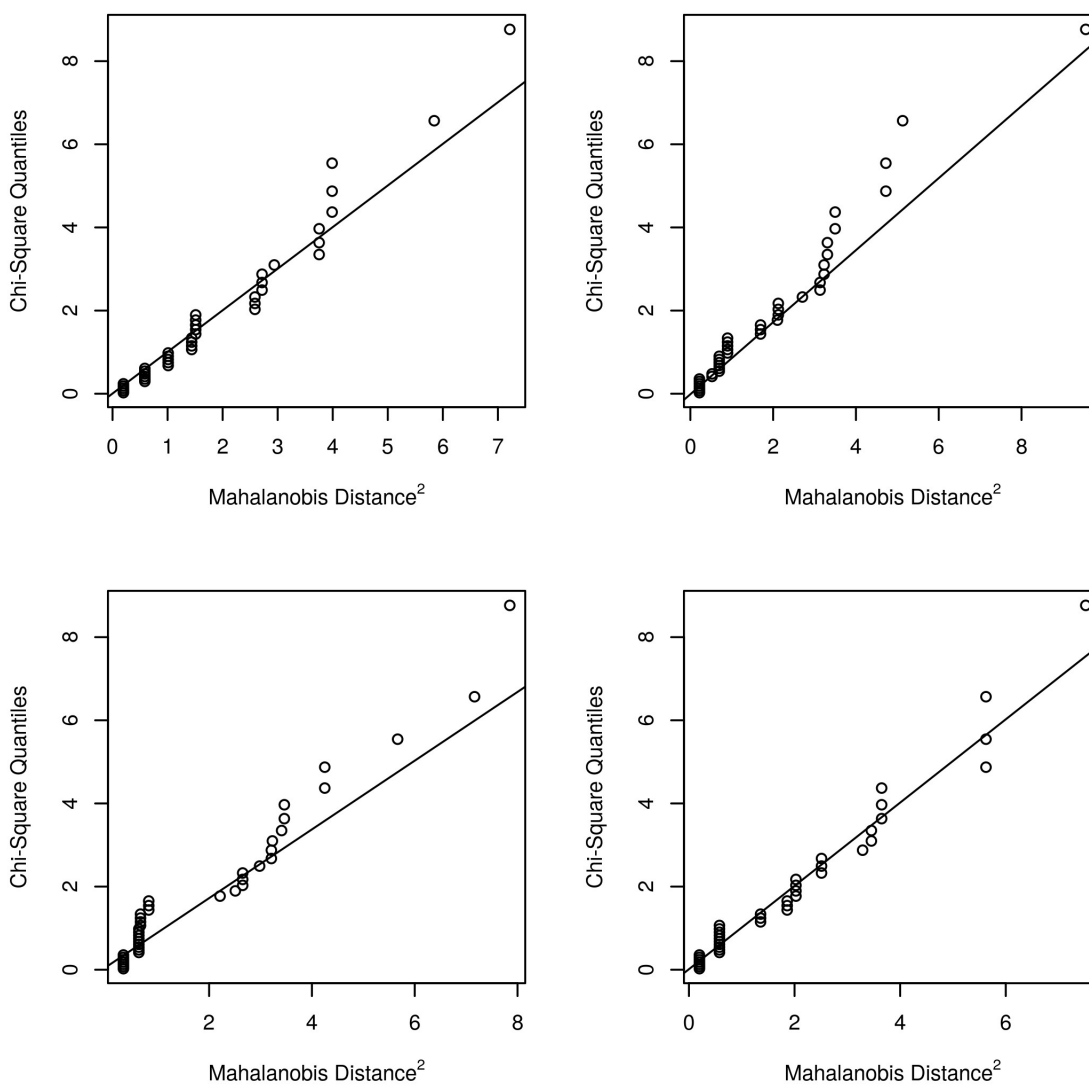
Appendix F: Question 19-20 Answers

Table F1

Question 19 Respondent Answers

ID	Question 19 answer
1	Monthly Subscriptions, Digital
2	services of convenience that make life easier
3	Practical Household Items, Beauty Services, Travel Services
4	Smart phones
5	Any product that can improve life overall
6	Respondent skipped this question
7	Tech gadgets
8	Products that make work more efficient, ease of access and shareability
9	Cosmetic and technology products and services
10	Ones with a discounted trial period or that advertise customer satisfaction
11	New Apps for services I use regularly- MD appts, banking, and shopping
12	Respondent skipped this question
13	Respondent skipped this question
14	Respondent skipped this question
15	Grocery delivery
16	Anything tech in nature.
17	Services that improve convenience and efficiency
18	Services or products would include anything that is convenient and doesn't take a lot of effort. I feel as though we as a society have become lazy. So products or services that are convenient are more easily accepted. For example: I pay 19.99 a month to have unlimited access to a drive thru car wash. I go maybe once a month. I could get the same wash for $14 but it's nice and convenient to have the unlimited access.
19	Respondent skipped this question
20	Products that are simple and have low probability of failure. Products that have been tested and peer reviewed.
21	Beauty products
22	Products that make my life easier or keep me organized. Services that I accept are usually those that are cool or fun.
23	Respondent skipped this question
24	Automated services

ID	Question 19 answer
25	Respondent skipped this question
26	Interior furnishings
27	None. Change is hard for me so I usually try to look into the product more or find something close to what I had.
28	Information technology
29	Delivery services such a grocery's. I'm also open to try new video games.
30	Respondent skipped this question
31	Any products that can benefit my clients.
32	Food
33	Respondent skipped this question
34	Respondent skipped this question
35	Personal computers; smartphones; mobile apps; healthy food or meal options; professional services for tasks with which I have no background or innate competence
36	Automated features
37	Cell phones
38	New software, equipment, always try to stay relevant with new ideas and equipment provided. As an education institute? Always try to stay ahead with new innovations.
39	Health (medications, self care products, etc.), Household (kitchen appliances, etc.), Textiles (clothing, etc.), Food Products, etc.
40	Electronics, salon services, animals care, food, animals products,

Note. Respondent's answers were not modified for spelling or grammatical errors.

Table F2

Question 20 Respondent Answers

ID	Question 20 answer
1	Insurances
2	anything that requires a phone call with real people or in person interaction.
3	Technology
4	New tablets
5	New products just introduced
6	Respondent skipped this question
7	Tech
8	Ones with little information or ability to troubleshoot or get support for. Or waiting on resolution due to being escalated. Aka front line customer service doesn't know how to fix and have to wait for upper management to review and assess
9	Investments and counseling
10	Ones that I deem "sketchy"--like it doesn't seem like customer satisfaction or durability are company priorities
11	New IOS updates can make changes to all my apps and confuse me.
12	Respondent skipped this question
13	Respondent skipped this question
14	Respondent skipped this question
15	Gym
16	Anything new that doesn't have a proven track record.
17	Products that require significant time investment before using
18	Anything that doesn't take too much thinking
19	Respondent skipped this question
20	Knock offs or refurbished equipment. Anything with potential security vulnerabilities. Products with hidden micro transactions required to unlock full potential.
21	Electronics
22	Services that reduce customer interaction with a live person. I want to speak to a live agent not a robot. Products I struggle to use are newer technologies that have not been around very long.
23	Respondent skipped this question
24	Newer versions of existing products
25	Respondent skipped this question

ID	Question 20 answer
26	Computer
27	Face cleansing, baby products.
28	Tbd
29	Any child watching services. I trust no one with the developmental of my child.
30	Respondent skipped this question
31	Off the shelf software without third party management
32	New technology
33	New technology, I like it to be vetted somewhat prior to it.
34	Respondent skipped this question
35	Cleaning products; anything blockchain (eft, bitcoins etc); healthcare portals
36	Services that have glitches or are an inconvenience to me as the customer and only beneficial to the company
37	Respondent skipped this question
38	Things that are too technical and lack enough instruction for the average person to understand. I find people highly technical sometimes forget not everyone can comprehend the technical language used by technically educated people. Need more simple, easy to understand content. Many people required to use technical equipment, etc. were not burn into it like today's young people…there is a much higher learning curve.
39	At times; phones, laptops etc.
40	New cars, car washes, DMV, make up, railroads, Uber,

Note. Respondent's answers were not modified for spelling or grammatical errors.