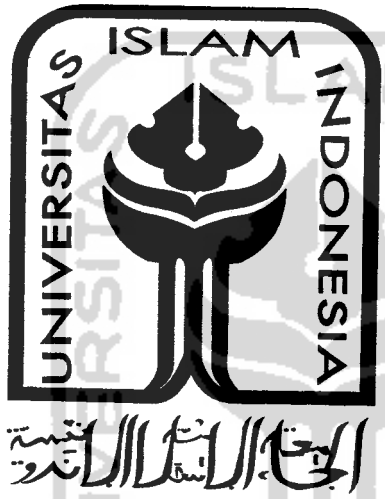
THE INFLUENCE OF STORE IMAGE AND STORE SATISFACTION ON STORE LOYALTY

A CASE STUDY OF AMBARUKMO PLAZA IN D.I. YOGYAKARTA)

A THESIS

Presented as a Partial Fulfillment of the Requirements
To Obtain the Bachelor Degree in Management Department



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2007

A Thesis

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Defended before the Board of Examiners
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STATEMENT OF FREE PLAGIARISM

Herein I declare the originally of this thesis; there is no other work which has ever presented to obtain any university degree, and in my concern there is neither one else's opinion nor published written work, except acknowledged quotation relevant to the topic of this thesis which have been stated or listed on the thesis bibliography.

If in the future this statement is not proven as it supposed to be, I am willing to accept any sanction complying with the determinate regulation for its consequence.

Yogyakarta, July 26, 2007

Farahdina Meutia Dewi

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TABLE OF CONTENT

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

ABSTRACT

There are a lot of retailers in today's market place, from the small retailer until the multinational grocery retailers are expanding retail business in Indonesia. It is not a surprise because Indonesia with more than 220 millions of people is a strategic market for retail industry especially Mall. That is why it becomes a promising business and one of the fast growth businesses in the world.

While some retailers are very successful, others are not. In order to increase the possibility of success, retailers must understand the consumer behavioral process that could affect the performance and competitive position of most retail. Most retailers would like to have a substantial base of loyal customers who continue to purchase in their stores. But what makes a customer loyal to the store? Some researcher connected with satisfaction and store image.

However, it has remained unclear what the exact relationship between satisfaction, image and loyalty in a retail setting is. For instance, one question that has been left unanswered concerns the issue whether there is a direct relationship between store image and store loyalty or whether there is an indirect relationship through store satisfaction. In this thesis the researcher tries to answer this question. The researcher proposes a model that describes the relationship between store image and store loyalty, taking into account the effect of store satisfaction.

The data collected from a sample of 100 Ambarukmo Plaza customers in D.I.Yogyakarta, indicate that: (1) Store Image is not directly influence to Store Loyalty; it must through mediator which is Store Satisfaction, (2) Store Image is formed significantly through convenient facilities then store atmosphere, value, location, service, after sales service and merchandising, (3) Store image has a strong influence on Store satisfaction, (4) Store Satisfaction is directly influence by most significantly "doing the right thing" and (5) Store Loyalty is directly influence by revisiting behavior. The theoretical and implications for future research are discussed.

ABSTRAKSI

Makin maraknya kehadiran ritel (pengecer) saat ini, mulai dari ritel kecil hingga ritel grosir multinasional (ritel asing) yang membuka usaha di Indonesia. Hal tersebut bukanlah sesuatu yg mengherankan karena Indonesia dengan 220 juta penduduk merupakan pasar yang strategis bagi industri ritel terutama Mall. Itulah sebabnya, Mall menjadi bisinis yang menjanjikan dan merupakan bisinis yang paling cepat pertumbuhannya di dunia.

Ketika beberapa ritel sangat sukses, yang lain tidak. Untuk meningkatkan kesempatan untuk sukses ritel harus mengerti proses perilaku konsumen yang dapat berakibat pada kinerja dan posisi kompetitif dari kebanyakan ritel. Para ritel pasti menginginkan untuk memiliki pelanggan loyal yang selalu berbelanja di tokonya. Tapi apakah yang membuat pelanggan setia terhadap toko? Beberapa peneliti menghubungkan dengan kepuasan dan citra toko.

Bagaimanapun, masi belum jelas bagaimana hubungan sebenarnya antara kepuasan, citra toko dan kesetiaan dalam retail. Contohnya, satu pertanyaan yang belum terjawab adalah apakah ada hubungan langsung antara citra toko dan kesetiaan atau apakah ada hubungan tidak langsung melalui kepuasan toko. Dalam skripsi ini peneliti berusaha menjawab pertanyaan tersebut. Peneliti megajukan model yang menggambarkan hubungan antara citra toko dan kesetiaan toko dengan melalui kepuasan toko.

Data-data yang dikumpulkan melalui sample dari 100 pelanggan Ambarukmo Plaza di D.I.Yogyakarta menunjukkan bahwa: (1) citra toko tidak secara langsung mempengaruhi kesetiaan toko; harus melalui perantara yaitu kepuasan toko, (2) citra toko dibentuk secara signifikan melalui kenyamanan fasilitas lalu store atmosphere, nilai, lokasi, pelayanan, pelayanan purna jual dan barang dagangan, (3) citra toko memiliki pengaruh yang kuat terhadap kepuasan toko, (4) Kepuasan toko dipengaruhi langsung secara signifikan oleh "melakukan hal yang benar", dan (5) Kesetiaan toko dipengaruhi secara langsung oleh perilaku membeli berulang. Kajian teori dan implikasi untuk peneliti di masa yang akan datang turut dibahas.

CHAPTER I

INTRODUCTION

1.1. Background of the Study

Indonesia with more than 220 millions of people is a strategic market for any industry including retail industry. In the past five years, the retail industry acts the strong character in the market channel in Indonesia. For example, In D.I.Yogyakarta there are three new hypermarkets (Carrefour, Diamond and Macro), one new Mall (Ambarukmo Plaza) and many other new stores.

Nowadays, the Malls are being positioned as a one-stop shopping entertainment for family, where they can not only do their shopping, but also watch movie and dine at the restaurants and food courts inside. So, Malls have transformed from being strictly purchase sites to being centers for many activities (Majumdar, 2005). That is why retail industry, especially Malls are a promising business and one of the fast growth business in the world.

It is due to not only rapid growth on revenue but also that many companies compete in this industry have made retail industry competition more sharply. With stiffer competition and bigger players competing in markets, retailers need to carefully assess their strategies in order to gain market share. One of the strategies is building a substantial base of loyal customers (Landsverk *et al., 2002*).

A crucial but classic issue is store loyalty. It has been along become a discussion among both marketing academics and practitioners. (Dick and Basu, 1994; Fornell *et al.*, 1996; Hallowell, 1996; Kasper, 1988; LaBarbera and Mazursky, 1983; Newman and Werbel, 1973; Oliver, 1996). Yet, in the present environment of increased competition with rapid market entry of new store concepts and formats (Maronick and Stiff, 1985), the managerial challenge of increasing store loyalty also presents the research challenge of a more in-depth understanding and an empirical estimation of this important type of consumer behavior.

There is some evidence that store loyalty may be (positively) related to store image (Mazursky and Jacoby, 1986; Osman, 1993; Bloemer and Ruyter, 1998) or satisfaction (Oliver, 1980; Hallowell, 1996; Patterson et al., 1997; Bolton, 1998). However, it has remained unclear what the exact relationship between satisfaction, image and loyalty in a retail setting is. For instance, one question that has been left unanswered concerns the issue whether there is a direct relationship between store image and store loyalty or whether there is an indirect relationship through store satisfaction. In this thesis the researcher tries to answer this question. The researcher proposes a model that describes the relationship between store image and store loyalty, taking into account the effect of store satisfaction.

1.2. Identification of the Problem

Every business tries to get bigger profit, including retail business. One way is by building lasting relationships with their customers because the best foundation for growth and profitability is to have a substantial base of loyal customers. Loyalty of a customer has been recognized as the dominant factor in a business organization's success. But what makes a customer loyal to a particular store? Then, what are the key drivers behind it? Many researchers imply that satisfaction and loyalty are highly related (Oliver, 1980; Hallowell, 1996; Patterson et al., 1997; Bolton, 1998) and some researchers connected with store image (Kandampully and Suhartanto, 2000, Bloemer and de Ruyter, 1998).

1.3. Formulation of The Problem

Based on the identification of the problem, the study is design to make a better understanding to store image and store loyalty, taking into account the effect of store satisfaction, through a case study of Ambarukmo Plaza in D.I. Yogyakarta. The problem statement guiding this study is:

1. Does store image influence store loyalty? or
2. Does store image influence store loyalty through store satisfaction?

1.4. Limitation of the Problem

a. Research objects of store image are limited to seven elements (store atmosphere, location, convenience facilities, value, service, after-sales

service, and merchandise). The reason is because those seven elements are mostly used by other researchers and actionable by managers.

b. The research is limited to the visitors of Ambarukmo Plaza in D.I Yogyakarta because it is a new Mall in Yogyakarta and puts effort in image building, customer satisfaction and loyalty programs.

1.5. Objectives of the Research

The general objectives of this study are to identify, describe and analyze the relationship between store image, store satisfaction and store loyalty; whether there is a direct influence between store image and store loyalty or whether there is an indirect influence through store satisfaction. The context of the study is Consumer behavior dealing with shopping activity in retail industry particularly Mall.

1.6. Contribution of the Research

This research examines about the influence of Store Image, Store Satisfaction and Store Loyalty in Ambarukmo Plaza Yogyakarta, which the researcher hopes will be beneficial for the following parties:

1. The researcher

   This research provides an understanding in the relationship of store image, store satisfaction and store loyalty so that the researcher will be able to compares the theory from lecture and its application on reality

2. The company

   Help to identify the influence and dominant factor of store image that influence store loyalty and identify the right strategy to gain market share

3. The research itself can be used as data or references in making decision to improve customer loyalty

4. For the common readers can be used to increase their knowledge about the influence of Store Image, Store Satisfaction on Store Loyalty

1.7. Definition of Terms

Following are the definition of terms that used in this research:

1. Store Image

   Store image is a function of a multi-attribute model of differently weighted subjective and objective store-related attributes with the inter-dependent dimensions that combine into an overall impression of the store.

2. Store Satisfaction

   Store satisfaction defined as the outcome of the subjective evaluation that the chosen alternative (the store) meets or exceeds expectations.

3. Store Loyalty

   Store loyalty as: The biased (i.e. non random) behavioral response (i.e. revisit), expressed over time, by some decision-making unit with respect to one store out of a set of stores, which is a function of psychological

(decision making and evaluative) processes resulting in brand commitment.

4. Accessibility

   The accessibility of a site is the ease with which a customer may into and get out of it. The mall accessibility construct refers to both macro such as primary trade area, nearness of the mall from consumer's house/work and condition of roads (road pattern, road condition, traffic congestion, etc); and micro accessibility factors refers to issues in the immediate vicinity of the site such as visibility, traffic flow, car parking, ingress/egress (Levy and Weltz, 2001).

5. Ambience

   The ambience refers to the character and atmosphere of a place like décor, color schemes, lighting, layout and background music played inside the mall (Levy and Weltz, 2001).

6. Amenities

   Amenities refer to the presence of features that makes a place pleasant, comfortable and easy to use/live in include presence of escalators, lifts, clean and adequate restrooms, presence of information kiosk, entertainment facilities, good fire safety equipments, presence of bank ATMs, etc (Wakefield and Baker, 1998).

7. Store Promotion

   It try to capture the effect of different promotional initiatives taken by the store like discounts and special offers, sale item, rewarding loyal customer from time to time, etc to build loyalty with customers.

8. Store Atmosphere

   The affective (emotional) and cognitive states consumers experience in a store, but may not be fully conscious of when shopping.

9. Location

   It concerned with strategic location of the mall itself, the access from and to the mall, and easiness to get public transportation

10. Convenient Facilities

    It is the convenience or the quality of being suitable to customer's comfort of facilities available in the Mall such as: toilet, parking lot, restaurant or food court, entertainment facilities and financial resources (ATM, credit, Bank, etc)

11. Value

    It is dealing with how customer value the merchandise sells in the mall. This is similar to the utility per unit price measure of value used by Hauser and Urban (1986).

12. Employee Service

    It is concerned with the quality and service of Human Resources (employee) at the mall

13. After Sales Service

    After-purchase assistance that is offered by the manufacturer to maintain the quality of the product during its use.

14. Merchandise

    Goods and commodities sold at the retail level.

CHAPTER II

REVIEW OF RELATED LITERATURE

2.1 Theoretical Review

The theoretical review consist of related topics of Store Image, Store Satisfaction and Store Loyalty that conducted by other researchers that selected for consideration.

2.1.1 Store Loyalty

The theories of store loyalty at a micro level (store level) as found in literature can be broadly divided into three major categories:

The first approach- specified by Charlton (1973) but drawing on earlier work (Enis and Paul, 1970; Tate, 1961) - is that store loyalty is essentially negative and is the outcome of limited resources: those who lack money, time and transport, or whose environment lacks choice (Tate, 1961) are forced to use one store much of the time and therefore obliged to be loyal.

The second approach (Carman, 1970) is also negative but emphasizes a lifestyle with commitments outside the home including work, little home entertaining and lack of interest in deals, advertising and shopping. Such people are averse to shopping and do not experiment.

A third approach is proposed by Dunn and Wrigley (1984) who noted that the growth in size of supermarkets and shopping centers in many countries could

have affected patterns of behavior. Dunn and Wrigley found that some store loyalty arose as one-stop shopping, often in large comprehensive supermarkets. This is what is called "discretionary loyalty." It differs from the first approach which implies that the possession of appropriate resources raises store loyalty. Increased car and freezer ownership (allowing more transport and storage) and larger retail units, can all assist discretionary loyalty. Discretionary loyalty is an adaptation to circumstances that are most likely to be found among population segments that need to be efficient because of household and work commitments, and have the opportunity to be efficient by virtue of car ownership and income. Those with limited incomes will have more need to shop around to secure the best value for money, and this would reduce store loyalty.

The marketing literature suggests that customer loyalty can be defined in two distinct ways (Jacoby and Kyner, 1973). The first defines loyalty as an *attitude*. Different feelings create an individual's overall attachment to a product, service, or organization (see Fornier, 1994). These feelings define the individual's (purely cognitive) degree of loyalty.

The second definition of loyalty is *behavioral*. Examples of loyalty behavior include continuing to purchase (repeat buying behavior) services from the same supplier, increasing the scale and or scope of a relationship, or the act of recommendation (Yi, 1990).

Considerable discussions exist in the academic literature over the definition and dimensionality of loyalty or similar construct like commitment (Ball, Coelho and Machas, 2004). Olive, Rust and Varki (1997) believed that the customer loyalty meant that customer maybe come under the environmental effect or the marketing technique induces their possibly latent transformation behavior, but they would not change their repeat purchase commitment and further purchase intention with preference commodity or service.

Similar to Jacoby and Kyner, Bowen and Shiang-Lih Chen (2001) distinct three approaches in general to measure loyalty:

1. Attitudinal measurement

   Use attitudinal data to reflect the emotional and psychological attachment inherent in loyalty

2. Behavioral measurements

   Consider consistent, repeat purchase behavior as indicator of loyalty

3. Composite measurements

   Combine the first two dimensions and measure loyalty by customers' product preferences, propensity of brand switching, frequency of purchase and total amount of purchase

In this study we use Composite measurement to measures the loyalty in questionnaire so that the accuracy and validity can be maintained.

A review of retail literature to identify the determinants influencing customer loyalty for retail store reveals the following major factors in customer loyalty studies: accessibility, ambience, amenities, retail mix (which includes price, assortment, variety, retail store personnel service), and store promotional activities (Majumdar, 2005). Those factors are similar to the elements of Store image, which means that store image has a correlation to store loyalty.

2.1.2 Store Satisfaction

As Datta and Chakraborty (2006) said that in today's competitive environment to compete with competition and sustain in business all organizations are investing resources to create loyal customers by offering superiors products, superior services to increase customers repurchase intentions, their commitment towards the organizations and satisfy customers' needs and wants. A satisfied customer has a positive post-purchase behavior which leads to him/her positive attitude and commitment toward organization. A committed customer is always remaining with the company for longer term while an unsatisfied, non-committed customer defect from the company.

Cardozo (1965) was the earliest proposed the customer satisfaction scholar, and he pointed out customer satisfaction increased the repeat purchase behavior and purchase other product. Howard and Sheht (1969) stated that customer satisfaction can be defined by customer comparison and appraisal. He thought the customer satisfaction was one kind of cognition condition that evaluated feedback whether suitable when they finished purchase. Churchill and

Surprenant (1982) thought the customer satisfaction was one kind of purchase and the use product result, and it was produced by the buyer anticipated result reward and the investment cost. Engel, Blackwell and Miniard (1984) stated the definition of customer satisfaction that people used product would evaluate consistency between the product performance and belief before purchase. If there is consistency, the customer will satisfy; otherwise, they will generate unsatisfied result.

Anderson, Fornell and Lehman (1994) induced the past scholar's viewpoint; they distinguished for *specific transaction* and *cumulative transaction* too explained the customer satisfaction. Specific transaction viewpoint suggested the customer satisfaction was the customer evaluated after buying behavior when some specific purchase place or timing, and it may provide diagnosis information to the specific commodity or service performance. Cumulative transaction viewpoint was the customer satisfaction evaluated all purchase commodity or service experience, and it may provide the company some important operational performance indicators in the future.

Satisfaction is considered as an antecedent of store loyalty (Bitner, 1990; Bloemer & Ruyter, 1998; Dang-Mo Koo, 2003). The relationship between satisfaction and loyalty is moderated by involvement (Bloemer and Kasper, 1995), and by personal characteristics such as demographic variables and the propensity to seek variety (Heskett et al., 1997). For example, the satisfaction-

loyalty link is stronger when involvement and experience are high (Bolton, 1998; Anderson, 1994). The relationship between satisfaction and loyalty is moderated by the type of failure recovery effort in service settings (Webster and Sundaram, 1998). For example, service recovery can negate or reduce the impact of dissatisfaction on loyalty.

More directly related to the retailing, Bloemer & Ruyter (1998) defined satisfaction as "the outcome of the subjective evaluation that the chosen alternative (the store) meets or exceeds expectations" (p.501). This conceptualization stems from the disconfirmation paradigm (Oliver, 1980), in which satisfaction is believed to occur through a matching of expectations the consumer elaborates on the evaluation of a store.

2.1.3 Store Image

Store image has been defined and operationalized in a myriad ways. Martineau (1958) was among the first to link store image or what he called as *personality of the store*, to the image that a shopper has of oneself. He defined the "store personality or image---the way in which the store is defined in the shopper's mind, partly by its functional qualities and partly by an aura of psychological attributes." (pg 47).

Martineau in his article lists the functional attributes as including aspects like location, price ranges and merchandise selection and illustrates the psychological attributes that contribute to creation of the store image: Layout

and architecture of the store, Symbols (emblems) and colors, Advertising and the store Sales Personnel.

Kunkel and Berry (1968) applied learning theory on the store image, and they used this idea discussion relationship between behavior of customer display and store image. They thought the image was one kind of difference stimulating, and it took action under some kind of situation that may obtain the anticipated effect.

Going by present literature, store image is anything from the perception of a store in the mind of a consumer to a reflection of the attitude of the consumer toward the store to complex of associated meanings and symbols.

Whereas some researchers focus on a store's functional qualities, others emphasize the consumer's psychological orientation, and still others treat image as a complex configuration of functional attributes, consumer perceptions, and attitudes. Following are classification system in which the different perspectives are used to categorize definitions into three conceptual groups: functional, psychological, and complex gestalt.

1. Functionally-oriented definitions locate store image in bricks-and-mortar store properties such as merchandise selection, layout, service quality, price range, and so forth, all of which can be compared objectively to

those of a competitor. From this perspective, store image is considered an element of retail strategy, controllable by store management.

2. Psychologically-oriented definitions locate image in the consumer's mind and treat it as a cognitive and/or emotional construct based on consumers' feelings. These feelings include the consumer's sense of brand-evoked 'belongingness' based on the image's capacity to evoke warmth and friendliness, excitement and interest and brand/person compatibility. From this perspective, store image is determined by the consumer.

Both functional and psychological definitions assume that image is a static entity, existing either in the real world or in the consumer's mind. For the most part, researchers agree that store image includes 'factually based opinions' and a mental structure of some sort that is tying together the dimensions that are at work (Lindquist, 1974–75). Here, functional and mental states are viewed as multidimensional, a consequence of the assortment of tangible or intangible elements that stimulate consumer perceptions.

3. Gestalt definitions reflect the challenge to state conceptualizations by process ones in which image is considered transactive rather than static. MacInnis and Price (1987) argue that 'imagery' is a distinct type of processing mode used by individuals to integrate information about an object (or event) into a gestalt. They suggest that people do not store

static images but, rather, that people form mental image in response to stimuli (encounters with salespersons, for example) that activate knowledge structures.

Some complex configuration definitions integrate state and process, based on the premise of store image as a dynamic and complex interaction that includes, but is not limited to, a summation of functional and psychological attributes.

Lindquist (1974) though that Martineau definition the functional qualities should be including commodity choices, price scope, credit policy, commodity layout and more objective quality aspect store factors, and the aura of psychological attributes should be including the sense of belong, warm or the kindness feeling, or exciting and interesting feeling. At the same time, Lindquist also mentioned that Martineau definition the functional qualities and the aura of psychological attributes all were used the plural. It was meant all of these were operated by above one dimension, and the consumer used these functional and psychological dimensions from the store image.

James, Duran and Dreves (1976) synthesized the former scholars' opinion and defined the store image as "an attitude mix that thought by consumer with the important store attribute and evaluated it's performed. Because attitude was kind of study phenomenon, therefore, store image was derived from one person experience with stores including purchase experience, the friend experience exchange and some invisible factors like the advertisement or the store layout.

Ditcher (1985) stressed that image certainly was not referred to the individual characteristic or quality, but the store overall image in the customer heart. Berman and Evans (1995) were defined the store image as the functional and emotional mix. These attributes were organized by the customer, and embodied in their consciousness system to help them decide the store policy and operation expectation.

Researchers have distinguished different store attributes or characteristics that are part of the overall image towards the store (the so-called retail mix). For example, Lindquist (1974), in his study on the store image literature, has combined models from 19 studies and came up with nine different elements: merchandise, service, clientele, physical facilities, comfort, promotion, store atmosphere, institutional and post-transaction satisfaction. The author used these elements as a base for questionnaires.

Doyle and Fenwick (1974) distinguished only five elements: product, price, assortment, styling and location. Bearden (1977) suggested the following characteristics: price, quality of the merchandise, assortment, atmosphere, location, parking facilities and friendly personnel. More recently, store image is supposed to be composed of the different elements of the retail marketing mix as introduced by Ghosh (1990). These eight elements are: location, merchandise, store atmosphere, customer service, price, advertising, personal selling and sales incentive programs.

Table 2.1

Attributes of Store Image according to Lindquist (1974)

Physical Facilities:
- Facilities available
- Store layout
- Aisle placement and width
- Carpeting
- Architecture

Merchandise:
- Quality
- Selection or assortment
- Styling or fashion
- Guarantees
- Pricing

Promotion:
- Sales promotion
- Advertising
- Displays
- Trading stamps
- Symbols & colors

Service:
- Service-general
- Salesclerk service
- Presence of self-service
- Ease of merchandise return
- Delivery service
- Credit policies

Post-Transaction satisfaction:
- Merchandise in use
- Return
- Adjustment
- Satisfaction with the purchase and with the store

Convenience:
- Convenience-general
- Location convenience
- Parking

Clientele:
- Social class appeal
- Self-image congruency
- Store personnel

Store atmosphere:
- Customer's feeling of warmth, acceptance or ease

Institutional factors:
- Conservative-modern projection of the store
- Reputation and reliability

For each retail store a distinct image may exist within consumers' minds. This is based on the salient elements of the retail mix. The merchandise of a retailer is its most important retail mix element, according to Ghosh (1990). A retailer has to make sure that he/she offers those products to his/her customers that they expect him/her to offer. Nevertheless, other nonfunctional elements also have to be in line with the expectations of the customer in order for a customer to become store loyal.

2.1.4 The Relationship between Store Image, Store Satisfaction and Store Loyalty

Theoretical Framework

The relationships between the variables are summarized in Figure 1 which depicts the conceptual framework. It is stated that (1) Store image has a direct positive influence to store loyalty or (2) Store image has an indirect positive influence to store loyalty through store satisfaction as a mediator.

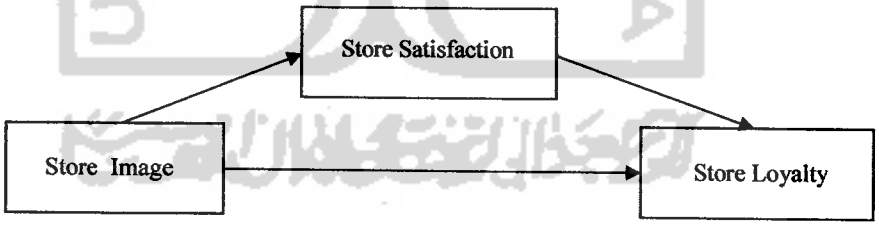

Figure 2.1 Conceptual Frameworks by Chih-Hon Chang and Chia-Yu Tu (2005)

Hypothesis Formulation

In this section, a conceptual framework was developed as Figure 1. The research Framework used in this study for interpreting and analyzing the determinants of store image and store loyalty relationship. Therefore, the researcher postulated the following hypothesis, and each of them will examine later.

The Relationship between Image, Satisfaction and Loyalty

The fact that the amount of customer satisfaction and store loyalty in general are positively related, as we expect, is hardly supported by the literature. Although a number of studies address the relationship between satisfaction and loyalty as related to products and services (Bloemer and Lemmink, 1992; Bloemer and Kasper, 1995; Burmann, 1991; Garfein, 1987; Kasper, 1988; Kraft *et al.*, 1973; LaBarbera and Mazursky, 1983; Newman and Werbel, 1973), there is little empirical evidence to support the explicit relationship between store satisfaction and store loyalty (Hummel and Savitt, 1988).

Customers' patronage behavior towards a particular store is dependent on their image of that particular store (Osman, 1993). The more favorable the store image, the higher the valence of the store to the customer. However, the exact relationship between store image and store loyalty has remained inconclusive. There is both evidence for a direct relationship and an indirect relationship

whereby store satisfaction acts as a mediator (Doyle and Fenwick, 1974; Houston and Nevin, 1981; Lindquist, 1974; Stanley and Sewall, 1976).

Therefore, we formulate the following hypotheses:

***H1*: Store image has a direct positive influence on store loyalty**

***H2*: Store image has an indirect positive influence on store loyalty through store satisfaction (i.e. a mediator-effect)**

CHAPTER III

RESEARCH METHOD

3.1. Research Method

The type of study in this research is an empirical research with a case study. The researcher employed quantitative and qualitative research. The method used in this research is a survey method by using questionnaires with itemized rating scale to asses' data.

3.2. Research Subject

3.2.1 Population

Zikmund (1991:450) defined population as any complete group of entities sharing some common set of characteristics. Populations for this research are the customers of Ambarukmo Plaza in D.I. Yogyakarta.

The target population for the study was Daerah Istimewa Yogyakarta customers who have visited Ambarukmo Plaza in the past two months. The time limit is assigned with assumption that it will be hard to remember if the last visit is more than two months. The sampling unit was the individual customer. Individuals below 11 years were excluded because children might encounter difficulties with the questions in the questionnaire. The author use questionnaires method in collecting the data. The method has merits in speed, economy, and control of respondent type.

3.2.2. Sampling Method

According Hair *et al* in his book Multivariate Data Analysis, he stated that in order to get valid result, the minimum samples are 50 respondents. Instead, it is not recommended to conduct it. Meaning that, the ideal number of sample is estimated into 100-150 samples. For the purpose of this research, 100 samples were taken as the sample respondents.

This research employs non-probability sampling method which means the probability of any particular member of the population being chosen is unknown (Zikmund, 1991:462). The type of non-probability sampling method that considered suitable with this research is convenience (accidental) sampling method. Convenience sampling method refers to the sampling procedures of obtaining the people or units that are most conveniently available.

3.3. Research Setting

An empirical study was conducted on April - May 2007 among customers of Ambarukmo Plaza in D.I.Yogyakarta. There are several reasons for taking a Mall as our object of study. In the first place, situational variables (e.g. geographical distance) play a less important role in determining customer attitude and patronage behavior (Muhammad F Ibrahim and Ng C Wee, 2002). Second, customers from a wide variety of segments commonly visit Mall, in contrast to, for instance, certain high-priced specialty stores. Third, the choice of a Mall guarantees variation in terms of products and brands. We surveyed the

customers of one Mall, Ambarukmo Plaza in Laksda. Adisucipto Street, D.I. Yogyakarta because our main variables pertain specifically to one store only. Finally, we chose this particular mall because it puts effort in image building, customer satisfaction and loyalty programs.

3.4. Research Instrument

3.4.1. Data Collection

There are two different kinds of data: secondary data and primary data. Secondary data is already collected material that has been summarized and documented by other researchers. Primary data is information that has not been collected and summarized; it has to be collected by the researchers themselves (Saunders et al, 2003).

3.4.1.1. Secondary Data

In order to get hold of secondary data about theories and journals concerning store image, store loyalty and store satisfaction books, articles, databases and the Internet have been used. The library at Economic Faculty of Universitas Islam Indonesia has been a central spot for collecting secondary data.

3.4.1.2. Primary Data

The primary data in this thesis mainly comes from the conducted questionnaires. The questionnaire is taken from Dong-Mo Koo (2003). The questionnaires comprise 4 parts. The First consist of Demographic profile, which consists of respondent's age, gender, marital status, degree of education, occupation and personal income per month. The second part is Store image (32

items): store atmosphere, location, convenient facilities, value, employee service, after sales service and merchandise (Dong-Mo Koo, 2003). The third part is Store satisfaction measured with 3 items from Brady et. al (2001), and the last part is Store loyalty also measured with 3 items from Jacoby & Chestnut (1978). The second, third and fourth part will measures with scales containing five-point Likert-scale items, ranging from 1 (= Strongly disagree) to 5 (= Strongly agree) with 3 (= Neutral).

3.4.2. Validity

Validity is the ability of scale to measure the intended concept (Sekaran, 2000). The function is to measure and analyze whether each item of instrument could explain the variable observed or not. The validity test of each data input is acquired by applying the correlation matrix. The values of corrected item total correlation (r) show the value of the significance of the correlation of the data. The data considered valid when r values are at least 0.3 (Sekaran, 2000).

3.4.3. Reliability

Reliability is a test to consistency and stability of the measuring instrument (Sekaran, 2000). Reliability test is designed to find out the consistency of measurement tool and it could give the result that is relatively consistent if there is re-measured in the same subject. It is done with for each type of questionnaire that shows its reliability. The reliability is showed by the value of alpha, in which the value of 0.6 above is considered reliable (Sekaran, 2000). In other word, if the result of alpha cronbach is closes to 1, thus said to be reliable to use.

3.5. Research Variables

3.5.1. Independent Variable

Independent variable is one that influences the dependent variable in either a positive or negative direction (Sekaran, 2000). Independent Variable analyzed in this study is Store image.

3.5.1.1.Store Image (X_1)

There are seven dimensions of Store image: (1) store atmosphere, (2) location, (3) convenient facilities, (4) value, (5) employee service, (6) after sales service and (7) merchandise. Each of them is measured by some indicators:

1. Store atmosphere:
    a. Layout
    b. Friendliness, accepted and warmth
    c. Aisle placement & width
    d. Lighting
    e. Air flow
    f. store design
2. Location:
    a. Place to meet people
    b. Access Attributes (easy access, traffic, public transportation, etc)
    c. Variety of stores near Ambarukmo Plaza
3. Convenient Facility:
    a. Easiness in finding merchandise
    b. Display

c. Presence of convenient facilities

d. The shelf

e. Public facilities

f. Entertainment facilities

4. Value:

a. Offers manufacturer coupons, free samples, sales and trading stamps

b. offers a lot of discount, special sales, promotions

c. Appropriate prices

5. Service:

Employee Service (helpfulness, friendliness, politeness, respond, appropriate explanation, trust)

6. After-sales Service:

a. Return policy

b. Refund policy

c. Easy exchange

7. Merchandise:

Variety of products, brand, assortment and specialties

3.5.2. Dependent Variable

It is the variable of primary interest the researcher (Sekaran, 2000). The Dependent Variable is Store Satisfaction (Y_1) and Store Loyalty (Y_2).

3.6. Technique of Data Analysis

3.6.1. Qualitative Analysis

The aim of qualitative analysis is a complete and detailed description. It relies on reasons behind various aspects of behavior. No attempt is made to assign frequencies to the linguistic features which are identified in the data, and rare phenomena receives (or should receive) the same amount of attention as more frequent phenomena. Qualitative analysis allows for fine distinctions to be drawn because it is not necessary to shoehorn the data into a finite number of classifications (www.wikipedia.com).

3.6.2. Quantitative Analysis

To analyze the data the researcher used analysis of *Structural Equation Modeling* (SEM). This model is *multivariate* analysis technique that probably helps researcher to test the correlation among variable *recursively* and *non-recursively,* to get whole analysis about whole model. This model was chosen to know how big The Influence of Store Image and Store Satisfaction on Store Loyalty regarding Customers of Ambarukmo Plaza. According to Hair, *et. al.,* (1998) process of *Structural Equation Modeling* (SEM) have steps that must be done, the steps of *Structural Equation Modeling* (SEM) are:

1. **Model Development Based on Theory**

Structural Equation Modeling (SEM) based causality relationship where changing one variable is assumed by causing of changing other variables. Strong causality relationship between two variables which assumed by

researcher is not because analysis method chose, but because theoretical justification to support the analysis (Ghozali, 2004:8).

2. Path Diagram and Structural Equation.

According to Ghozali (2004), there are two important things, arranging the structural model by correlating latent construct (endogenous and exogenous) with indicator variable *(manifest variable)*.

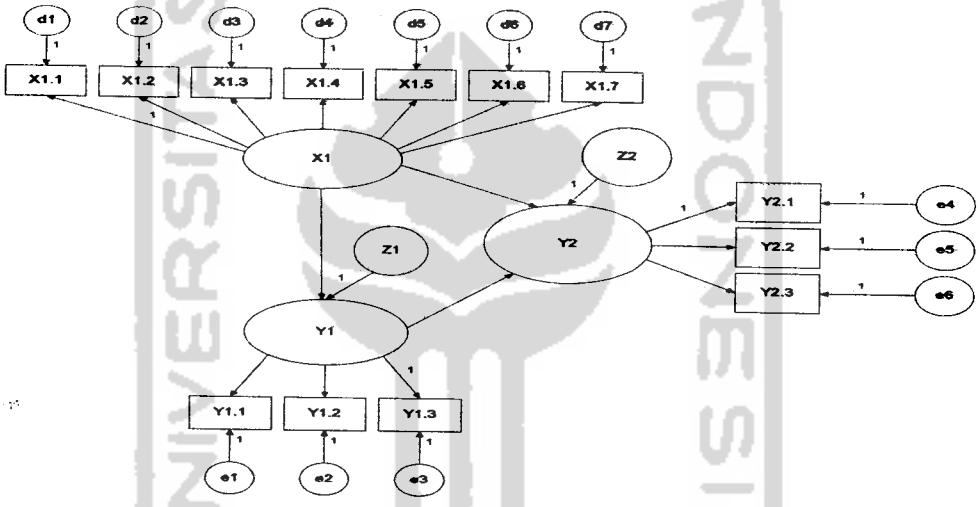

Figure 3.1 ***Path Diagram*** **of the Influence of Store Image and Store Satisfaction toward Store Loyalty in Ambarukmo Plaza**

3. Choosing Input Matrix and Estimation Model

Structural Equation Modeling (SEM) is different with other multivariate analysis techniques, SEM only uses data input that is variance/covariance matrix or correlation matrix. Rough data from questionnaire is change into

variance/covariance matrix or correlation matrix, so that the equation also stated as *covariance structural analysis.*

Covariance matrix has more advantage than correlation matrix in giving comparison validity between different population and different sample. The use of correlation is best suited if the research objectives are simply to understand the pattern of construct relationship, but do not describe the total variance of the construct (Ghozali, 2004).

4. Structural Model Identification

Identification problem is incapability of proposed model to result estimation model. In order to see the identification problem, is by seeing the estimation result, those are: big value of *standard error* for one or more coefficients, incapability of program to invert *information matrix,* impossible estimation value (negative *error variance*), and high correlation (>0.90). If there is any identification problem, so there are 3 things that must be concerned, coefficient amount that relatively estimated toward covariance or identified correlation with small value of *degree of freedom (df),* using reciprocal correlation among constructs, failures in determining fix value on construct scale (Ghozali, 2004).

5. Goodness of Fit Criteria

If *offending estimate* happens, those are: negative variance *error* or *non-significant error variance* of construct, *standardized coefficient* close to value of 1.0, and high standard error, so the cause of offending *estimate* must be

eliminated first. In SEM analysis, there is no single statistical test tool to measure or test the model (Hair, *et. Al.,* 1995; Joreskog & Sorbom, 1989; Long, 1983; Tabachnic & Fidell, 1996, in Ferdinand, 2002). *Fit Index* and *cut of value* that is used to test whether the model can be accepted or not is listed:

a) Absolute Fit Measures

1) Likelihood Ratio Chi Square Statistic

An analysis tool to measure overall fit is *likelihood ratio chi-square statistic,* with the sample of 100 respondents. The model which is tested will be considered good or satisfied if the *chi-square* (χ^2) value is small. Small value of χ^2 means that the model is good ($\chi^2 = 0$, means that there is nothing differences, Ho is accepted) and accepted based on probability with the *cut of value of* $p>0.05$ or $p>0.10$ (Hulland, *et. Al.,* 1996, in Ghozali, 2004).

Because this analysis objective is to develop and test a model which suits and *fit* based on the data, so it required insignificant value of χ^2 that test null hypotheses (*estimated population covariance* is not equal than *sample covariance*). Value of χ^2 can be compared with *degree of freedom (df)* to get relative value of χ^2 and it is used to make conclusion that high relative value of χ^2 means that there is significant difference between covariance matrix observed and covariance matrix estimated.

Small value of χ^2 will result the significant level more than 0.05 that indicates that there is no significant difference between covariance matrix data and covariance matrix estimated (Hair, *et. Al.,* 1995, in Ghozali, 2004).

2) CMIN/DF (*The minimum Sample Discrepancy Function)*

The minimum Sample Discrepancy Function (CMIN) divided by its *degree of freedom (df)* will result in CMIN/DF (generally, it is used for researcher as indicator to measure fit level of model. CMIN/DF is also as *chi-square* statistic; χ^2 divided by its *degree of freedom (df)* is relative χ^2. Value of χ^2 relatively less than 2.0 or even less than 3.0 as indication of *acceptable fit* between model and data (Arbuckle, 1997 in Ghozali, 2004).

3) GFI (*Goodness of Fit Index*)

Fit Index can measure proportion of variance in covariance matrix sample stated by estimated matrix covariance population (Bentler, 1983; Tanaka & Huba, 1989 in Ghozali, 2004). GFI is *non-statistical* measurement tool that has value ranging from 0 (*poor fit*) until 1.0 *(perfect fit)*. High value in this index shows *"better fit"*.

4) RMSEA (*The Root Mean Square Error of Approximation*)

RMSEA is index that can be used to compensate *chi-square* statistic in big sample (Baumgartner & Homburg, 1996, in Ghozali, 2004). RMSEA value shows expected *Goodness of Fit Index* if it estimated model in population (Hair, *et. al.,* 1995). Small value of RMSEA (=0.08) means that model that shows *close fit* of model based on *degree of freedom (df)* can be accepted (Browne & Cudeck, 1993, in Ghozali, 2004)

b) Incremental Fit Measures

1) AGFI (*Adjusted Goodness of Fit Index*)

Tanaka & Huba (1989) and Ghozali (2004) stated that GFI was analogue of R^2 in multiple regressions. This *Fit Index* can be adjusted toward available *degree of freedom (df)* to test whether the model can be accepted or not (Arbuckel, 1999, in Ghozali 2004: 20). The index can be obtained from the equation below:

$$AGFI = 1 - (1 - GFI)\frac{d_b}{d}$$

Where

$$d_b = \sum_{g=1}^{\hat{c}} p^{*(g)} = \text{Sample } moments$$

$$d = degrees\ of\ freedom$$

Acceptance level that is recommended is if AGFI has equal value with more than 0.90 (Hair, *et.al.,* 1996, in Ghozali, 2004). GFI and AGFI are the criteria that measure proportion of variance in a covariance matrix sample. Value of 0.95 can be interpreted as *good overall fit* level and range value of 0.090-0.95 shows *adequate fit level* (Hulland, *et. Al.,* Ghozali, 2004).

2) TLI (*Tucker Lewis Index*)

TLI is *incremental fit index* alternative that compares tested model toward baseline model (Baugartner Homburg, 1996). The recommended value as the base of the model is ≥ 0,90 (Hair, *et. al.*, 1995), and the value that is close to 1 (one) shows a very good fit(Arbuckle, 1997, in Ghozali, 2004:32). Index as follows:

$$TLI = \frac{\left(\chi^2_{null}/df_{null}\right) - \left(\chi^2_{proposed}/df_{proposed}\right)}{\left(\chi^2_{null}/df_{null}\right) - 1}$$

Or:

$$TLI = \frac{\frac{C_b}{d_b} - \frac{C}{d}}{\frac{C_b}{d_b} - 1}$$

Where C is discrepancy of model that is evaluated and d is degree of freedom, meanwhile C_b and d_b is discrepancy and *degrees of freedom* from the *baseline model* that has comparison.

3) NFI (Normed Fit Index)

NFI is the comparison measurement between *the proposed model* and *the null model*. The value of NFI will be varied from 0 *(no fit at all)* until 1.0 *(perfect fit)*. Like TLI, there is no *absolute value* used as the standard, but generally recommended as equal or > 0.90

6. Model Interpretation

According to Ghozali (2004), a model is stated as acceptable, when it can consider making a modification index to recover theoretical justification or goodness of fit. This modification must have a consideration. If modification model must be cross validated (estimated with separated data) before modification model accepted or if it got value absolute fit model from default model, with chi-square that relatively big value, that is showed by significant probability level ($p < 0.5$) so it requires modification. Model can be stated as good fit model if probability level of chi-square relatively is smaller than in significant probability level ($p > 0.05$).

CHAPTER IV

RESEARCH FINDINGS, DISCUSSION, AND IMPLICATIONS

4.1. Research Description

4.1.1. Overview of the Strategy Analysis

This research was conducted at Ambarukmo Plaza in D.I. Yogjakarta and aimed to answer the questions as mentioned in the previous chapter.

The first section discusses the descriptive analysis. It describes the respondent demographic characteristics, which includes the respondent's age, gender, marital status, degree of education, and personal income per month. The next section is Measurement Model to determine whether the data is valid, reliable and meets the requirements of further analysis.

Quantity analysis used in this research is *Structural Equation Model* (SEM) with AMOS program version 6.0, *Structural Equation Model* chosen to determine how significant the model of the influence of Store Image and Store Satisfaction toward Store Loyalty. One hundred respondents were used for the purpose of this research.

4.1.2. The Respondent's Demographic Characteristics

This research was conducted in Ambarukmo Plaza in D.I. Yogjakarta, where a hundred respondents are taken as samples. The purpose is to identify the

customer's characteristics of Ambarukmo Plaza. The distribution of the respondents' characteristics is described in the tables below as follows:

4.1.2.1. Respondents' Gender

Based on the respondents' gender, there are two categories, male and female. The data of the analysis result based on respondents' characteristic of gender is showed in table 4.1.

Table 4.1

The Distribution Frequencies of the Respondents' Gender

Gender	Frequency	Percentage
Male	34	34 %
Female	64	64 %
Total	100	100 %

Source: Primary Data (computed), 2007

Table 4.1 describes that most of Ambarukmo Plaza's customers are female (64%) and the rest are male (38%).

4.1.2.2. Respondents' Age

Based on the respondents' age, there are 4 groups: 11 - 20 years old; 21 - 30 years old; 31 - 40 years old and 41 – 50 years old. The data of the analysis result based on respondents' characteristic of age is showed in table 4.2.

Table 4.2

The Distribution Frequencies of the Respondent's Age

Age	Frequency	Percentage
11 - 20 years	22	22 %
21 - 30 years	68	68 %
31 - 40 years	6	6 %
41 - 50 years	4	4 %
51 – 60 years	0	0
> 60 years	0	0
Total	100	100 %

Source: Primary Data (computed), 2007

Table 4.2 describes that most of Ambarukmo Plaza's customers are between 21 - 30 years old (68%). From the age point of view, the segment of Ambarukmo Plaza is between 21 to 30 years old. This separation may be important because it may indicate two different characteristics. From this result, the researcher concludes that customers of Ambarukmo Plaza are young people and in productive age.

4.1.2.3. Respondents' Education Background

Based on the respondents' education background, there are three categories that are: Junior High School, High School, and University graduate. The data of the analysis result based on respondents' characteristic of education background is showed in table 4.3.

Table 4.3

The Distribution Frequencies of the Respondent's Education Background

Last Education	Frequency	Percentage
Elementary School	0	0
Junior High School	6	6 %
High School	57	57 %
University graduate	37	37 %
Other	0	0
Total	100	100 %

Source: Primary Data (computed), 2007

Table 4.3 describes that most of the Ambarukmo Plaza's customers are High school (57%). Based on the result of respondent's education background, the researcher concludes that the customers of Ambarukmo Plaza have enough knowledge and understanding about Store image, store satisfaction and store loyalty. It means that Ambarukmo Plaza can easily transform the information to the customers rationally.

4.1.2.4. Respondents' Occupation

Based on the respondents' occupation, there are five categories of customers: Student/College students, Government officer, Private employee, Entrepreneur and Others. The data of the analysis result based on respondents' characteristic of education background are showed in table 4.4.

Table 4.4

The Distribution Frequencies of the Respondent's Occupation

Occupation	Frequency	Percentage
Student/College student	60	60 %
Government Officer	10	10 %
Private Employee	9	9 %
Entrepreneur	9	9 %
Other	12	12 %
Total	100	100 %

Source: Primary Data (computed), 2007

Table 4.4 describes that most of Ambarukmo Plaza's customers are student/ college students (60%). This result shows that respondent's occupation has the relevance with respondent's age, dominated by the age of less than 30 years old. Besides, it is due to the fact that there are lots of students and college students in Yogyakarta as *Kota Pelajar* (Student City).

4.1.2.5. Respondents' Personal Income

Based on the respondents' personal income, there are six categories of customers: Customers with Rp.0 - 500,000; Rp.500,000 – Rp.1,000,000; Rp.1,000,000 – Rp. 1,500,000; Rp.1,500,000 – Rp.2,000,000; Rp.2,000,000 – Rp.2,500,000; and > Rp. 2,0500,000. The data of the analysis result based on respondents' characteristic of personal income are showed in table 4.5.

Table 4.5

The Distribution Frequencies of the Respondent's Occupation

Occupation	Frequency	Percentage
Rp.0 - 500,000	76	76 %
Rp.500,000 – Rp.1,000,000	8	8 %
Rp.1,000,000 – Rp. 1,500,000	11	11 %
Rp.1,500,000 – Rp.2,000,000	3	3 %
Rp.2,000,000 – Rp.2,500,000	1	1 %
> Rp. 2,500,000	1	1 %

Source: Primary Data (computed), 2007

4.1.3. Measurement Model

Measurement model in this research is used to know *unobserved variable* that can be measured by each *observed variable* construct, by using *Confirmatory Factor Analysis* (CFA) or well known as factor analysis. If the value of *factor loading* from each construct is more than 0,5 (λ>0,5), it can be stated as reliable and significance rate of 5% (p<0,05), it can be states as valid, or *unobserved variable* can be measured by using each *observed variable* construct (Hair, *et al.*, 1998).

4.1.3.1. Store Image Construct

Store image construct *(unobserved/latent variable)* measured by using indicator *(observed/manifest variable)*, there are 32 questions in the questionnaires which are divided by seven dimension of Store image. The result of *confirmatory factor analysis* (CFA) is:

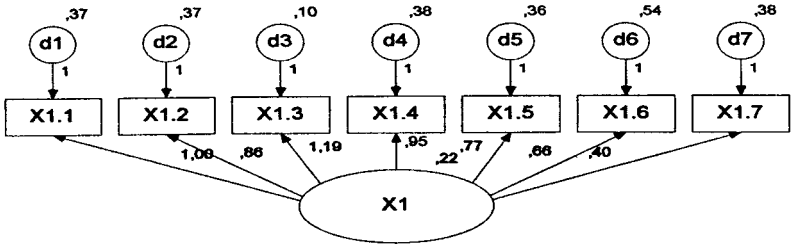

Figure 4.1. ***Confirmatory Factor Analysis*** **(CFA) of Store Image Construct**

Table 4.6

Measurement of Store Image Construct

Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
X1.1 <--- X1	1,000				
X1.2 <--- X1	,860	,204	4,223	***	par_1
X1.3 <--- X1	1,190	,190	6,252	***	par_2
X1.4 <--- X1	,949	,226	4,196	***	par_3
X1.5 <--- X1	,773	,208	3,713	***	par_4
X1.6 <--- X1	,661	,217	3,052	,002	par_5
X1.7 <--- X1	,397	,163	2,439	,015	par_6

The result of *confirmatory factor analysis* (CFA) leads to the value for each construct (*loading factor or* λ):

$$Y1 = \lambda_1 Y1.1 + \lambda_2 Y1.2 + \lambda_3 Y1.3 + \lambda_4 Y1.4 + \lambda_5 Y1.5 + \lambda_6 Y1.6 + \lambda_7 Y1.7$$

$$Y1 = 1{,}000Y1.1 + 0{,}860\,Y1.2 + 1{,}190Y1.3 + 0{,}949Y1.4 + 0{,}773Y1.5 + 0{,}661Y1.6 + 0{,}397Y1.7$$

The equation above shows that store Image is influenced dominantly by *Convenient facilities* (Y1.3 = 1,190)

4.1.3.2. Store Satisfaction Construct

The data of Store Satisfaction construct (*unobserved/latent variable)* were determined by using three indicators *(observed/manifest variable)*, they are: I am satisfied with my decision to purchase product at Ambarukmo Plaza (Y1.1), I made a wise judgment to buy product at Ambarukmo Plaza (Y1.2), When I finish shopping and come out of Ambarukmo Plaza, I thought I did the right thing (Y1.3). The result of *confirmatory factor analysis* (CFA) is:

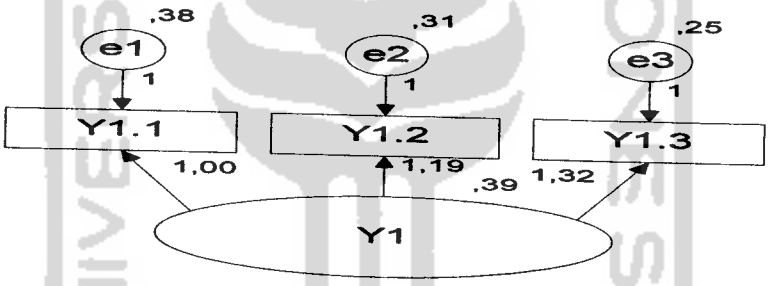

Figure 4.2. ***Confirmatory Factor Analysis*** **(CFA) of Store Satisfaction Construct**

Table 4.7

Measurement of Store Satisfaction Construct

Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Y1.1 <--- Y1	1,000				
Y1.2 <--- Y1	1,186	,172	6,896	***	par_1
Y1.3 <--- Y1	1,321	,191	6,909	***	par_2

The result of *confirmatory factor analysis* (CFA) leads to the value for each construct *(loading factor or λ)*:

$$Y1 = \lambda_1 Y1.1 + \lambda_2 Y1.2 + \lambda_3 Y1.3$$

$$Y1 = 1{,}000Y1.1 + 1{,}186Y1.2 + 1{,}321Y1.3$$

The equation above shows that Store Satisfaction is influenced dominantly by *I thought I did the right thing* (Y1.3 = 1,321).

4.1.3.3. Store Loyalty Construct

The data of Store Loyalty construct *(unobserved/latent variable)* were determined by using three indicators *(observed/manifest variable)*, they are: I am committed to maintaining my purchasing at Ambarukmo Plaza (Y2.1), I plan to maintain my general shopping habits at Ambarukmo Plaza (Y2.2), I would recommend Ambarukmo Plaza to other people (Y2.3). The result of *confirmatory factor analysis* (CFA) is:

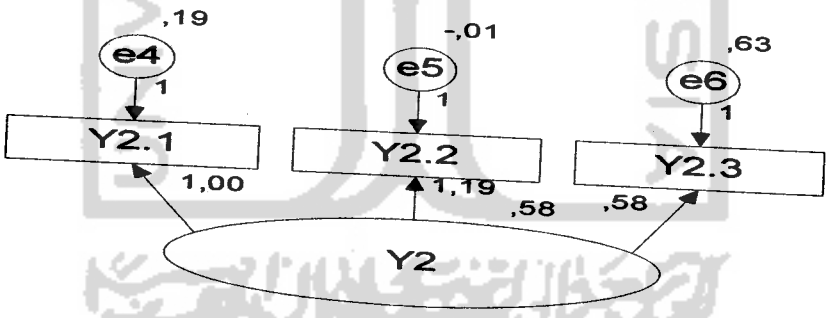

Figure 4.3. ***Confirmatory Factor Analysis*** **(CFA) of Store Loyalty Construct**

Table 4.8

Measurement of Store Loyalty Construct

Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Y2.1 <--- Y2	1,000				
Y2.2 <--- Y2	1,190	,138	8,601	***	par_1
Y2.3 <--- Y2	,584	,109	5,344	***	par_2

The result of *confirmatory factor analysis* (CFA) leads to the value for each construct *(loading factor or λ)*:

$$Y2 = \lambda_1 Y2.1 + \lambda_2 Y2.2 + \lambda_3 Y2.3$$

$$Y2 = 1{,}000Y2.1 + 1{,}190Y2.2 + 0{,}584Y2.3$$

From the equation above, it can be concluded that Store Loyalty is influenced dominantly by *maintain general shopping habits at Ambarukmo Plaza* (Y2.2 = 1,190).

4.1.4. Goodness of Fit Model

To know good criteria of model *(Goodness of Fit)*, it uses: *Absolute Fit Measured, Incremental Fit Measured* and *Parsimonious Fit Measured.* The result of the measure based on *Absolute Fit Measured, Incremental Fit Measured* and *Parsimonious Fit Measured* is as follows:

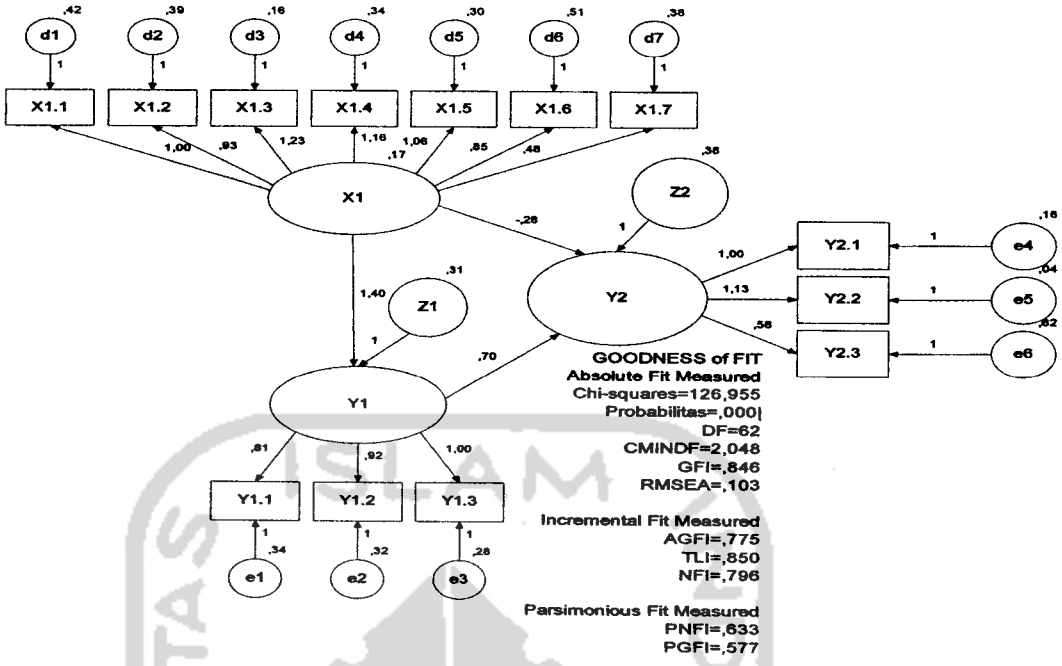

Figure 4.4. Measurement of Absolute Fit Measured, Incremental Fit Measured and Parsimonious Fit Measured *before* Modification

From the analysis result can be get as follows:

Table 4.9

Goodness of Fit Index before Modification Indices

Goodness of Fit Index	*Result*	*Cut Off Value*	Model Evaluation
Absolute Fit Measured			
Likelihood Chi Square	126,955	< 81,38102	Marginal
CMIN/DF	2,048	≤ 2,00	Marginal
GFI	0,846	≥ 0,90	Marginal
RMSEA	0,103	≤ 0,08	Marginal
Incremental Fit Measured			
AGFI	0,775	≥ 0,90	Marginal
TLI	0,850	≥ 0,90	Marginal
NFI	0,796	≥ 0,90	Marginal
Parsimonious Fit Measured			
PNFI	0,633	0,60 – 0,90	Good
PGFI	0,577	0,50 – 1,00	Good

From the measurement's result of *Goodness Fit Index* above, it can be seen that the amount of *Absolute Fit Measured* that is measured by using *Likelihood Chi Square*, Cmin/df, GFI, and RMSEA got *Cut Off Value* which have not yet fulfilled the expected criteria, that are *Likelihood Chi Square* and GFI. And the amount of *Incremental Fit Measured* that is measured by using AGFI, TLI and NFI got *Cut Off Value* that have not yet fulfilled the expected criteria, that are AGFI and NFI. For the value of *Parsimonious Fit Measured* which is measured by using PNFI and PGFI, it is resulted the *Cut off Value* which has already fulfilled the expected criteria. Table 4.10 shows the whole estimation model.

Table 4.10

***Result (Default Model)* before Modification**

Summary	Value
Chi-square	126,955
Degrees of freedom	62
Probability level	0,0001

Table 4.10 shows that probability level is significant = 0,0001 ($p<0,05$), it shows that there is deviation between *sample covariance matrix* and *model (fitted) covariance matrix*. In order to be a good model, the value of *chi square* should have insignificant probability level (>0.05) to get expected value of *Goodness Fit Index* (better). It is required to do model revision by making *modification index* to revise the model by increasing parameter amount, so that value of *Chi Squares Statistic* will decrease rapidly compared to decreasing of *degree of freedom* (df), by doing *modification indices* according to value showed in Table 4.11 as follows:

Table 4.11

Modification Indices* by using *Covariance

			M.I.	Par Change
e1	<-->	e4	4,461	,059
e2	<-->	e6	4,070	-,103
d7	<-->	Z2	6,957	-,110
d7	<-->	e6	5,611	,117
d7	<-->	e4	8,295	-,078
d6	<-->	Z2	5,887	,119
d5	<-->	Z1	8,945	,119
d5	<-->	e6	5,415	,107
d4	<-->	e6	4,159	-,101
d3	<-->	d5	7,405	-,072
d1	<-->	d6	6,054	-,121
d1	<-->	d3	17,463	,129
d1	<-->	d7	4,515	,072
d7	<-->	e2	4,017	-,069

Modification Indices can only be done based on *measurement error covariance* value assumed by 0 (zero), because modifying with *measurement error covariance* does not need to do theoretical justification. But Modification Indices based on *measurement regression weight* must be supported by theory (Ghozali, 2004). The result of *modification index* can be seen in figure 4.5 and table 4.12.

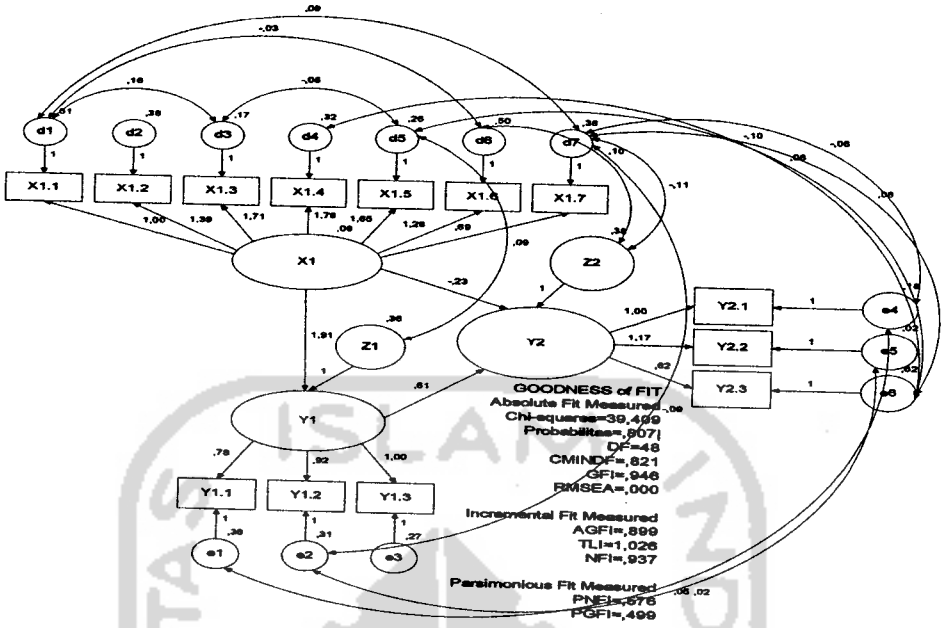

Figure 4.5. Measurement of Absolute Fit Measured, Incremental Fit Measured and Parsimonious Fit Measured *after* Modification

From the analysis result can be get as follow:

Table 4.12

Goodness of Fit Index after Modification Indices

Goodness of Fit Index	*Result*	*Cut Off Value*	Model Evaluation
Absolute Fit Measured			
Likelihood Chi Square	39,409	< 65.17077	Good
CMIN/DF	0,821	≤ 2,00	Good
GFI	0,946	≥ 0,90	Good
RMSEA	0,000	≤ 0,08	Good
Incremental Fit Measured			
AGFI	0,899	≥ 0,90	Marginal
TLI	1,026	≥ 0,90	Good
NFI	0,937	≥ 0,90	Good
Parsimonious Fit Measured			
PNFI	0,576	0,60 – 0,90	Marginal
PGFI	0,499	0,50 – 1,00	Marginal

From the measurement's result of *Goodness Fit Index* above, it can be seen that the amount of *Absolute Fit Measured* that is measured by using *Likelihood Chi Square,* Cmin/df, GFI, and RMSEA derives *Cut Off Value* which has already fulfilled the expected criteria. And the amount of value of *Incremental Fit Measured* by using AGFI, TLI and NFI resulted *Cut Off Value* that is have not yet fulfilled the expected criteria, that are AGFI and NFI. The value of *Parsimonious Fit Measured* which is measured by using PNFI and PGFI led to *Cut Off Value* which has already fulfilled expected criteria. Table 4.13 shows the whole estimation model.

Table 4.13

***Result (Default Model)* after Modification Indices**

Summary	*Value*
Chi-square	39,409
Degrees of freedom	48
Probability level	0,8071

Source: Appendices E

Table 4.13 shows that probability level is not significant = 0,8071 (p>0,05), so this model already become a good model *(goodness fit model)*, good model has insignificant probability level more than α= 5% (Ghozali, 2004:45), so it shows conformity between *sample covariance matrix* and *model (fitted) covariance matrix* (Joreskog & Sorbom, 1993; Joreskog & Sorbom, 1996; Hair, *et. al.*, 1998; Joreskog, 2002:76). Thus, whole model used has fulfilled the expected criteria (*Goodness of Fit Model).*

4.1.5. Causal Correlation and Hypotheses Test

To know how big significant level of regression between indicator variable and latent variable, *Regression Weight* can be used by comparing probability level. If the probability level is less than α= 5%, it can be said that it has significant regression. From *regression weight*, the result is as follow:

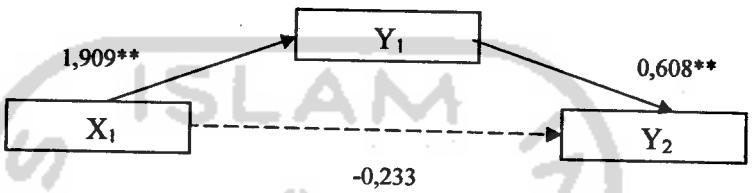

Figure 4.6. Regression Coefficient Store Image, Store Satisfaction toward Store Loyalty

Explanation:

——→ = significant regression

- - - - - - - - → = insignificant regression

** = Probability Level less than 5% (p<0,05)

Table 4.14

Regression Weights

			Estimate	S.E.	C.R.	P	Label
Y1	<---	X1	1,909	,651	2,935	,003	par_11
Y2	<---	X1	-,233	,402	-,581	,561	par_12
Y2	<---	Y1	,608	,152	4,001	***	par_13

From the *regression weight* on Table 4.14, it can be concluded that Store Image (X_1) has positive influence on Customer Loyalty (Y_2) also store Satisfaction (Y_1) has positive influence on Customer Loyalty (Y_2); while store Satisfaction

(Y_1) has no significantly positive influence on Customer Satisfaction (Y_1) because the significant level is more than 0,05. With the significant level of less than 5%, the equation can be stated as follows:

$$Y_1 = \beta_1 X_1 + \zeta_1$$

$$Y_1 = 1{,}909 X_1 + \zeta_1$$

$$Y_2 = \beta_1 X_1 + \beta_2 Y_1 + \zeta_2$$

$$Y_2 = 0{,}233 X_1 + 0{,}608 Y_1 + \zeta_2$$

$$Y_2 = \beta_1 X_1 + \zeta_2$$

$$Y_2 = 0{,}233 X_1 + \zeta_2$$

4.1.5.1.The influence of Store Image (X_1) toward Store Satisfaction (Y_1)

Variable of Store Image (X_1) has significantly positive influence on Store Satisfaction (Y_1) = 1,909 with the significant level of 0,003 ($p<0,05$). It means that if variable of Store Image (X_1) increases, Store Satisfaction (Y_1) will increase also and vice versa. So it can support the hypotheses 2 that Store Image influences Store Satisfaction.

4.1.5.2. The influence of Store Satisfaction (Y_1) toward Store Loyalty (Y_2)

Variable of Store Satisfaction (Y_1) has significantly positive influence on Store Loyalty (Y_2) = 0,608 with the significant level of 0,000 ($p<0,05$). It means that

if variable of Store Satisfaction (Y_1) increases, Customer Loyalty (Y_2) will increase and vice versa. So it can support hypotheses 2 that Store Satisfaction influence on Store Loyalty.

4.1.5.3. The direct Influence of Store Image (X_1) toward Store Loyalty (Y_2)

Variable of Store Image (X_1) has no significant influence on Store Loyalty (Y_2) = -0,233 with the significant level of 0,561 ($p>0,05$). It means that variable of Store Image (X_1) has no influence to Store Loyalty (Y_2). So it can not support hypotheses 1 that Store Image has a direct positive effect on Store Loyalty.

4.1.6. Discussion

From the result of the analysis, the relationship among Store Image, Store Satisfaction and Store Loyalty can be measured by *Structural Equation Modelling* (SEM). To know the dominant variable that influences Store Loyalty, which is *standardized regression weight* can be used. From the analysis the researcher get the result as follows:

Table 4.15

Standardized Regression Weight

			Estimate
Y1	<---	X1	,673
Y2	<---	X1	-,088
Y2	<---	Y1	,648

The analysis result shows that among three correlations above, the dominant variable is Store Image to Store Satisfaction. This finding is relevant to the theory of Chih-Hon Chang and Chia-Yu Tu (2005), they stated that the hypermarket industry customer satisfaction acted an intermediation role between store image and customer loyalty. Further they also stated that not only effective promotion customer's loyalty need good store image, but also need the promotion customer satisfaction that can really effectively enhance and maintain the customer loyalty.

This finding also supported by Bloemer and Ruyter (1998), Sirgy and Samli (1985), Kumar and Karande (2000), and Thang and Tan (2003). All of them suggest that Store Image has indirect impact on store loyalty or repeated visiting behaviour mediated by store satisfaction or by emotional experience in retail stores (Yoo et, al., 1998; Spies et, all. 1997).

4.1.7. Theoretical and Practical Implication

This study was to investigate whether there is a direct relationship between store image and store loyalty or whether there is an indirect relationship through store satisfaction. It has provided empirical evidence for the development of consumer behaviors involving store image, store satisfaction and store loyalty in retail industry especially Mall. It has provided strong empirical support for Bloemer and Ruyter's (1998) Store satisfaction theory. It stated that when combined with

effect on store loyalty is stronger than the effect resulting from latent satisfaction. Thus, manifestly satisfied customers are the true store loyal, while latently satisfied consumers are potential store switchers (Bloemer Ruyter,1997).

Management can stimulate customers to be satisfied on their store by put more effort on store image. This can be achieved, for instance, by using the convenience facilities in Ambarukmo Plaza that guarantee customer satisfaction. Moreover, the store can be linked to store atmosphere, important values (e.g. environmentally friendly products), by accentuating personalized services and customer-oriented lay-out and design, by providing clear and understandable information (e.g. with respect to warranties) and by building a permanent relationship with the customer (e.g. by establishing preferred customer memberships).

Basically, store loyalty management means store satisfaction management. Since the effect of the image of the store comes through store satisfaction, it seems of second order importance. However, this does not mean to say that the image of the store is unimportant because it is modified by the satisfaction judgment of the customer. Rather, this signifies that store loyalty is built through store satisfaction. And that satisfaction is built among other things (like convenience facilities, store atmosphere, values, location, service, etc.) by store

image. Truly loyal customers are manifestly satisfied with the store and have a positive image towards the store.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusions

Based on the data analysis and the discussion, the researcher presents conclusion as follows:

1. Customer of Ambarukmo Plaza is dominated by female who are in the age of between 21 - 30 years old and their educational background is high school and most of them are students or college students with personal income of Rp.0 – Rp.500,000,- per month.
2. Store image variable has significantly positive influence on Store Satisfaction. It means that if variable of Store Image (X_1) increases, store Satisfaction (Y_1) will increase and vice versa. So hypothesis 2 is proven. In other words, Customer of Ambarukmo Plaza is very concerned on the Store Image to decide whether they satisfied or not to Ambarukmo Plaza.
3. Store Satisfaction variable has significantly positive influence on Store Loyalty. It means that if variable of Store Satisfaction (Y_1) increases, Store Loyalty (Y_2) will increase and vice versa. So, customer of Ambarukmo Plaza must be satisfied first before they become loyal to Ambarukmo Plaza. Hypothesis 2 is proven.
4. Variable of Store Image has no effect on Store Loyalty. It means Store image is not directly influence Store Loyalty and needs intervening

variable or mediator effect which is Store Satisfaction. So, Hypothesis 1 is not proven.

5. Customer of Ambarukmo Plaza is dominated by female who are in the age of between 21 - 30 years old and their educational background is high school and most of them are students or college students with personal income of Rp.0 – Rp.500,000,- per month.
6. From seven dimensions of store image: store atmosphere, location, convenient facilities, value, employee service, after sales service and merchandise, the most dominant dimension that influences Store satisfaction is dimension of *convenient facilities* but in contrary *merchandise* dimension is the less influence.

5.2. Recommendation

From the result of the analysis suggest that Ambarukmo Plaza must satisfy the customers to build store loyalty. Store loyalty can be build through store image so, increase and improving their store image especially the convenient facilities is needed. Increase convenient facilities first then store atmosphere, value, location, service, after-sales service and merchandise to increase the Store Satisfaction which will also increase store loyalty.

This study confirms that young people, the hedonic shopper hold a dynamic consumer base. College age students and younger consumers in general seem to be a prime market segment, so as a source of stimulation and entertainment, the

retail environment offers these consumers an outlet to incorporate shopping into their leisure time. The retail environment also serves as a convenient place to spend time together with friends and families. In order to help optimize young consumers' shopping experience, retailers must provide an entertaining and fun atmosphere that encourages exploration and inquiry.

Convenience facilities can be created through the presence of convenient facilities itself, public facilities, good parking lot and rest room, easiness to find product conveniently by make the shelves not too high and excellent entertainment alternatives for sport, foods and beverages. Atmosphere can be promoted through remodeling layout and design to make customers move easily around the store, creating situation that makes customers feel warmth, accepted and ease, also good lighting, good aisle placement & width. In store service can be enhanced through the placement of knowledgeable, kind employees within the store and implementing appropriate refunding and exchange program. Diverse merchandising will widen customers' choice alternatives. Ambarukmo Plaza also needs to emphasize on loyalty program such as membership to more encourage customers' store loyalty.

Another strategy is by using Saturday shopping habits. As we know, in Saturday young people mostly hang out with their friends and families, shopping, etc which mean they spent many time in the entertaining place such as Ambarukmo Plaza because it is holiday on Sunday. According to Gentry *et al.* (1997)

described the type of shopping done on Sundays in the U.S. in terms similar to those found in the present inquiry regarding Saturday shopping - namely it is recreational, hedonic and "fun" nature. So, Saturday has developed into an opportunity to pursue hedonic wants. Ambarukmo Plaza can create a longer store hours on Saturday appear to provide a readily accepted substitute.

5.3. Guidelines for Future Research

1. Research objects of store image are limited to seven elements (store atmosphere, location, convenience facilities, value, service, after-sales service, and merchandise).
2. The result of this research gives temporary effect, because customer expectation is varied through the times.
3. The subject of research is only conducted in Ambarukmo Plaza Yogyakarta by taking / testing 100 respondents only.
4. The research does not investigate every possible irrelevant effect that influences customer loyalty.

Based on the limitations, the researcher suggests the following guidelines for future research:

1. Using more elements of store image will create more detailed research
2. Using larger respondents or even wider areas are suggested for the next / future research to have more reliable data. Further, the number of research

subject should be developed in order to gain results which are broadly accepted.

3. The future research should incorporate with other possible irrelevant effects that influence customer loyalty for example attitude toward a discount retail store to more understand on customer behaviour dealing with store loyalty.

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APPENDICES A

QUESTIONNAIRES

Kepada:

Yth, Pelanggan Ambarukmo Plaza

Di tempat

Dengan Hormat,

Dalam rangka penelitian mengenai Citra Toko (Store Image), Kepuasan terhadap Toko (Store Satisfaction) dan Kesetiaan terhadap Toko (Store Loyalty) bagi pelanggan Ambarukmo Plaza, berikut ini kami sampaikan daftar pertanyaan yang disusun sebagai prasarana untuk memperoleh masukan dari anda.

Dalam kuesioner ini yang dimaksud dengan penelitian mengenai toko bukanlah salah satu dari toko-toko di dalam Ambarukmo Plaza melainkan Ambarukmo sendiri secara keseluruhan sebagai toko. Jawaban yang anda berikan tidak ada benar ataupun salah, kami lebih melihat angka-angka terbaik dari persepsi pelanggan tentang pelayanan yang diberikan Ambarukmo Plaza. Data dan identitas responden dijamin kerahasiaannya.

Hormat Saya

Farahdina Meutia Dewi

Bagian 2: Berikan nilai antara 1 sampai 5 (dilingkari/disilang)

Dengan Ketentuan **1= Sangat Tidak Setuju (STS)** **4= Setuju (S)**

2= Tidak Setuju (TS) **5= Sangat Setuju (SS)**

3= Netral (N)

Citra Ambarukmo Plaza

PERTANYAAN	PERNYATAAN				
	STS	TS	N	S	SS
***Store Atmosphere*:**					
1. Layout Ambarukmo Plaza memudahkan saya untuk berbelanja	1	2	3	4	5
2. Saya merasakan keramahan, diterima dan nyaman	1	2	3	4	5
3. Penempatan rak dan jarak antar rak bagus	1	2	3	4	5
4. Pencahayaan bagus	1	2	3	4	5
5. Sirkulasi udara baik	1	2	3	4	5
6. Penataan toko menarik	1	2	3	4	5
Lokasi:					
7. Ambarukmo Plaza adalah tempat yang nyaman untuk bertemu orang lain	1	2	3	4	5
8. Ambarukmo Plaza mudah dijangkau dari berbagai arah	1	2	3	4	5
9. Mudah mendapat transportai umum	1	2	3	4	5
10. Disekitar Ambarukmo Plaza terdapat banyak toko yang menawarkan berbagai produk	1	2	3	4	5
***Kenyamanan Fasilitas*:**					
11. Saya mudah menemukan barang yang saya cari di Ambarukmo Plaza	1	2	3	4	5
12. Display barang di Ambarukmo Plaza bagus	1	2	3	4	5
13. Ambarukmo Plaza memiliki fasilitas yang nyaman seperti toko obat, fasilitas kesehatan, kecantikan,dsb	1	2	3	4	5
14. Rak-rak di Ambarukmo Plaza tidak terlalu tinggi sehingga mudah di ambil dengan tangan	1	2	3	4	5
15. Ambarukmo Plaza memiliki fasilitas umum seperti bank, kantor pos, dsb	1	2	3	4	5
16. Tempat parkir dan toilet nyaman di Ambarukmo Plaza	1	2	3	4	5
17. Ambarukmo Plaza memiliki fasilitas hiburan yang menarik untuk olah raga, makanan dan minuman	1	2	3	4	5
18. Kenyamanan dalam melakukan one stop shopping	1	2	3	4	5
Nilai:					
19. Ambarukmo Plaza sering manawarkan kupon. Sample gratis dan voucher	1	2	3	4	5
20. Ambarukmo Plaza menawarkan berbagai macam diskon, harga khusus dan promosi	1	2	3	4	5
21. Ambarukmo Plaza menawarkan harga yang sesuai	1	2	3	4	5

untuk barang yang dijual					
Pelayanan:					
22. Pegawai Ambarukmo Plaza sangat membantu, ramah dan sopan	1	2	3	4	5
23. Pegawai di Ambarukmo Plaza menanggapi permintaan saya dengan baik	1	2	3	4	5
24. Penjual memberikan penjelasan secara layak	1	2	3	4	5
25. Saya dapat mempercayai pegawai toko di Ambarukmo Plaza	1	2	3	4	5
Layanan Purna Jual:					
26. Toko-toko di ambarukmo Plaza memiliki peraturan pengembalian barang	1	2	3	4	5
27. Barang yang rusak dapat dikembalikan dengan mudah dan dapat diganti dengan uang	1	2	3	4	5
28. Layanan purna jual yang mudah dan bagus	1	2	3	4	5
Barang Dagangan:					
29. Ambarukmo Plaza menjual berbagai macam merk	1	2	3	4	5
30. Ambarukmo Plaza menjual berbagai macam produk dari produsen yang berbeda	1	2	3	4	5
31. Di Ambarukmo Plaza terdapat bermacam toko yang menjual produk tertentu	1	2	3	4	5
32. Ambarukmo Plaza menjual banyak item barang	1	2	3	4	5

Kepuasan Pelanggan Ambarukmo Plaza

PERTANYAAN	PERNYATAAN				
	STS	TS	N	S	SS
1. Saya merasa puas dengan keputusan saya untuk membeli barang di Ambarukmo Plaza	1	2	3	4	5
2. Saya membuat penilaian yang bijaksana dengan membeli barang di Ambarukmo Plaza	1	2	3	4	5
3. Saya melakukan hal yang benar dengan belanja di Ambarukmo Plaza	1	2	3	4	5

Kesetiaan Pelanggan ambarukmo Plaza

PERTANYAAN	PERNYATAAN				
	STS	TS	N	S	SS
1. Saya berkomitmen untuk tetap berbelanja di Ambarukmo Plaza	1	2	3	4	5
2. Saya berencana untuk mempertahankan kebiasaan belanja di Ambarukmo Plaza	1	2	3	4	5
3. Saya akan merekomendasikan Ambarukmo Plaza ke orang lain	1	2	3	4	5

TERIMA KASIH

APPENDICES B

RESPONDENTS DATA

No.	X1.1	X1.2	X1.3	X1.4	X1.5	X1.6	X1.7	Jumlah	Rata-rata
1	5	4	5	3	4	3	4	28	4
2	4	3	4	3	3	2	4	23	3
3	7	3	4	2	3	2	4	25	4
4	3	3	3	2	3	2	3	19	3
5	3	3	3	3	4	3	5	24	3
6	4	4	4	3	4	3	5	27	4
7	7	3	4	4	4	3	5	30	4
8	3	3	3	3	3	3	4	22	3
9	3	4	3	3	3	2	3	21	3
10	4	3	3	3	4	3	3	23	3
11	3	3	3	2	3	3	4	21	3
12	4	4	4	4	4	2	4	26	4
13	4	3	4	3	3	2	4	23	3
14	5	4	3	2	4	2	5	25	4
15	3	3	3	3	3	3	3	21	3
16	4	4	4	3	3	3	4	25	4
17	4	3	3	2	3	2	5	22	3
18	4	3	4	4	4	3	5	27	4
19	4	4	4	2	4	2	4	24	3
20	4	3	4	3	3	2	4	23	3
21	4	4	4	3	4	3	5	27	4
22	4	3	3	3	3	3	4	23	3
23	3	3	3	3	3	2	4	21	3
24	4	3	3	3	3	2	4	22	3
25	4	4	4	4	3	3	3	25	4
26	4	5	4	3	3	2	4	25	4
27	4	4	4	3	4	3	4	26	4
28	4	4	4	4	4	3	4	27	4
29	4	3	3	2	4	2	4	22	3
30	4	4	4	3	3	3	4	25	4
31	4	4	4	2	3	2	4	23	3
32	4	4	4	4	3	3	4	26	4
33	4	5	4	4	4	3	5	29	4
34	2	5	3	4	5	4	5	28	4
35	4	3	3	3	3	3	4	23	3
36	4	4	4	2	2	3	5	24	3
37	3	3	3	3	3	3	4	22	3
38	4	3	3	3	3	2	4	22	3
39	4	4	4	4	4	3	4	27	4
40	4	4	4	4	4	3	4	27	4
41	4	5	4	2	3	1	5	24	3
42	5	5	5	4	5	4	3	31	4
43	5	5	4	4	3	2	5	28	4
44	4	2	3	3	4	1	3	20	3
45	5	4	4	4	4	1	5	27	4
46	5	4	5	4	4	2	4	28	4
47	4	4	4	5	5	2	5	29	4
48	4	5	4	4	5	2	4	28	4
49	5	5	5	4	5	5	5	34	5
50	5	4	5	5	4	4	5	32	5
51	5	5	5	4	4	3	4	30	4
52	5	3	5	4	5	4	5	31	4
53	4	5	3	3	4	3	4	26	4
54	4	4	4	3	4	2	5	26	4

55	4	4	4	4	4	5	4	29	4
56	3	4	3	3	3	3	5	24	3
57	3	3	3	3	4	3	4	23	3
58	4	4	3	3	4	2	5	25	4
59	5	4	4	3	4	3	5	28	4
60	3	4	3	3	3	4	3	23	3
61	4	3	3	4	3	4	4	25	4
62	5	3	4	5	3	3	5	28	4
63	4	3	3	3	4	2	4	23	3
64	5	4	4	2	1	3	4	23	3
65	5	5	5	4	5	4	3	31	4
66	4	4	3	3	3	2	4	23	3
67	3	2	3	2	3	1	3	17	2
68	4	3	3	3	3	1	4	21	3
69	4	3	4	3	3	2	3	22	3
70	3	3	3	4	4	2	4	23	3
71	4	4	3	3	4	2	4	24	3
72	4	4	4	3	4	4	4	27	4
73	4	3	4	4	4	3	4	26	4
74	4	4	4	3	3	2	3	23	3
75	4	3	4	3	4	3	5	26	4
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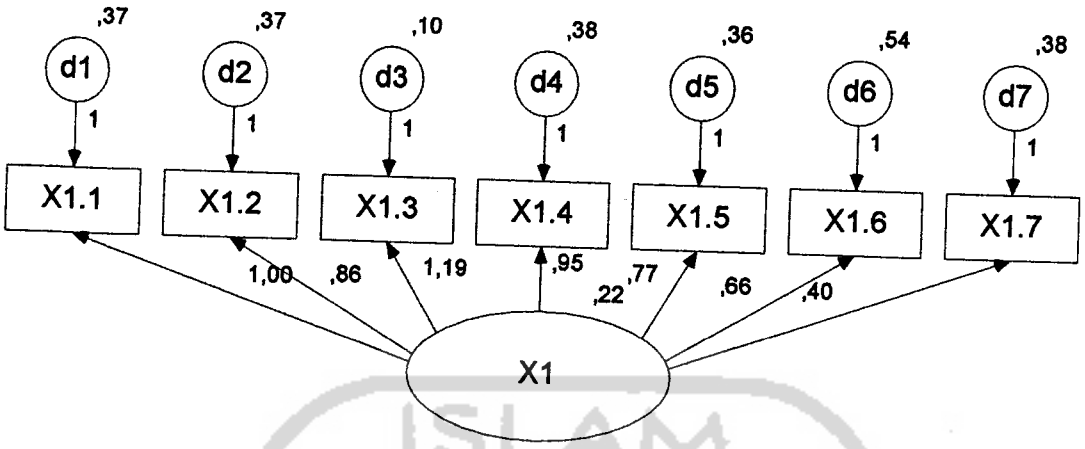
77	3	3	3	2	3	2	4	20	3
78	3	3	3	3	3	4	4	23	3
79	3	3	3	3	2	2	4	20	3
80	3	2	3	2	3	2	3	18	3
81	3	3	3	2	3	2	4	20	3
82	4	3	3	3	3	2	4	22	3
83	3	3	3	2	3	3	4	21	3
84	4	4	4	4	4	2	4	26	4
85	4	3	4	3	3	2	4	23	3
86	5	4	3	2	4	2	5	25	4
87	3	3	3	3	3	3	3	21	3
88	4	4	4	3	3	3	4	25	4
89	4	3	3	2	3	2	5	22	3
90	4	3	4	4	4	3	5	27	4
91	4	4	4	2	4	2	4	24	3
92	4	3	4	3	3	2	4	23	3
93	4	4	4	3	4	3	5	27	4
94	4	3	3	3	3	3	4	23	3
95	3	3	3	3	3	2	4	21	3
96	4	3	3	3	3	2	4	22	3
97	4	4	4	4	3	3	3	25	4
98	4	5	4	3	3	2	4	25	4
99	4	4	4	3	4	3	4	26	4
100	4	4	4	4	4	3	4	27	4

No.	Y1.1	Y1.2	Y1.3	Jumlah	Rata-rata	No.	Y2.1	Y2.2	Y2.3	Jumlah	Rata-rata
1	5	5	5	15	5	1	4	4	4	12	4
2	2	3	2	7	2	2	2	2	3	7	2
3	3	4	3	10	3	3	3	3	3	9	3
4	3	2	3	8	3	4	3	2	3	8	3
5	2	2	3	7	2	5	3	3	3	9	3
6	3	3	2	8	3	6	2	2	3	7	2
7	5	5	5	15	5	7	4	4	3	11	4
8	2	2	2	6	2	8	2	2	3	7	2
9	3	3	3	9	3	9	4	4	3	11	4
10	3	4	3	10	3	10	2	3	3	8	3
11	3	3	2	8	3	11	2	2	4	8	3
12	4	4	4	12	4	12	3	2	4	9	3
13	2	4	2	8	3	13	2	2	4	8	3
14	2	2	2	6	2	14	2	2	4	8	3
15	2	2	2	6	2	15	4	3	3	10	3
16	4	3	3	10	3	16	3	3	4	10	3
17	3	3	4	10	3	17	2	2	3	7	2
18	5	4	4	13	4	18	4	4	4	12	4
19	4	4	4	12	4	19	3	2	3	8	3
20	4	4	4	12	4	20	3	3	3	9	3
21	5	3	3	11	4	21	3	3	5	11	4
22	4	4	3	11	4	22	3	3	3	9	3
23	4	4	4	4	4	23	4	3	3	10	3
24	3	2	3	8	3	24	3	4	4	11	4
25	3	4	3	10	3	25	4	3	3	10	3
26	4	3	3	10	3	26	3	3	3	9	3
27	4	4	4	12	4	27	3	3	3	9	3
28	4	4	4	12	4	28	4	3	4	11	4
29	4	4	2	10	3	29	2	2	2	6	2
30	3	4	4	11	4	30	3	3	3	9	3
31	3	2	3	8	3	31	2	1	3	6	2
32	4	3	3	10	3	32	3	3	4	10	3
33	4	4	4	12	4	33	4	4	4	12	4
34	4	4	4	12	4	34	4	4	4	12	4
35	3	3	3	9	3	35	3	3	3	9	3
36	3	2	2	7	2	36	2	2	2	6	2
37	3	3	3	9	3	37	3	3	4	10	3
38	4	5	4	13	4	38	4	4	3	11	4
39	4	4	4	12	4	39	4	4	4	12	4
40	4	4	4	12	4	40	4	4	4	12	4
41	3	3	3	9	3	41	3	3	5	11	4
42	5	5	5	15	5	42	5	5	5	15	5
43	4	2	1	7	2	43	2	1	1	4	1
44	5	2	2	9	3	44	5	4	4	13	4
45	4	4	2	10	3	45	2	2	4	8	3
46	4	4	4	12	4	46	2	2	2	6	2
47	2	4	4	10	3	47	2	2	2	6	2
48	5	5	5	15	5	48	4	4	5	13	4
49	5	5	5	15	5	49	4	4	4	12	4
50	5	5	5	15	5	50	2	2	2	6	2
51	2	2	2	6	2	51	2	2	2	6	2
52	5	5	5	15	5	52	5	5	5	15	5
53	4	4	2	10	3	53	2	2	4	8	3
54	4	4	5	13	4	54	2	2	5	9	3
55	4	4	4	12	4	55	4	4	4	12	4
56	4	2	4	10	3	56	2	2	5	9	3
57	4	4	4	12	4	57	4	4	5	13	4
58	4	5	4	13	4	58	2	2	2	6	2

59	4	2	4	10	3	59	2	1	4	7	2
60	4	4	3	11	4	60	2	2	2	6	2
61	3	3	2	8	3	61	3	2	3	8	3
62	4	3	3	10	3	62	3	3	3	9	3
63	3	4	3	10	3	63	3	3	3	9	3
64	3	3	3	9	3	64	3	3	2	8	3
65	5	5	5	15	5	65	5	5	5	15	5
66	3	2	1	6	2	66	2	1	1	4	1
67	4	2	2	8	3	67	4	3	3	10	3
68	3	3	2	8	3	68	2	2	3	7	2
69	3	3	3	9	3	69	2	2	2	6	2
70	2	3	3	8	3	70	2	2	2	6	2
71	4	4	4	12	4	71	3	3	4	10	3
72	4	4	4	12	4	72	3	3	3	9	3
73	4	4	4	12	4	73	2	2	2	6	2
74	2	2	2	6	2	74	2	2	2	6	2
75	4	4	4	12	4	75	4	4	4	12	4
76	3	3	2	8	3	76	2	2	3	7	2
77	3	3	4	10	3	77	2	2	4	8	3
78	3	3	3	9	3	78	3	3	3	9	3
79	3	2	3	8	3	79	2	2	4	8	3
80	3	3	3	9	3	80	3	3	4	10	3
81	3	4	3	10	3	81	2	2	2	6	2
82	3	2	3	8	3	82	2	1	3	6	2
83	3	3	2	8	3	83	2	2	4	8	3
84	4	4	4	12	4	84	3	2	4	9	3
85	2	4	2	8	3	85	2	2	4	8	3
86	2	2	2	6	2	86	2	2	4	8	3
87	2	2	2	6	2	87	4	3	3	10	3
88	4	3	3	10	3	88	3	3	4	10	3
89	3	3	4	10	3	89	2	2	3	7	2
90	5	4	4	13	4	90	4	4	4	12	4
91	4	4	4	12	4	91	3	2	3	8	3
92	4	4	4	12	4	92	3	3	3	9	3
93	5	3	3	11	4	93	3	3	5	11	4
94	4	4	3	11	4	94	3	3	3	9	3
95	4	4	4	4	4	95	4	3	3	10	3
96	3	2	3	8	3	96	3	4	4	11	4
97	3	4	3	10	3	97	4	3	3	10	3
98	4	3	3	10	3	98	3	3	3	9	3
99	4	4	4	12	4	99	3	3	3	9	3
100	4	4	4	12	4	100	4	3	4	11	4

APPENDICES C

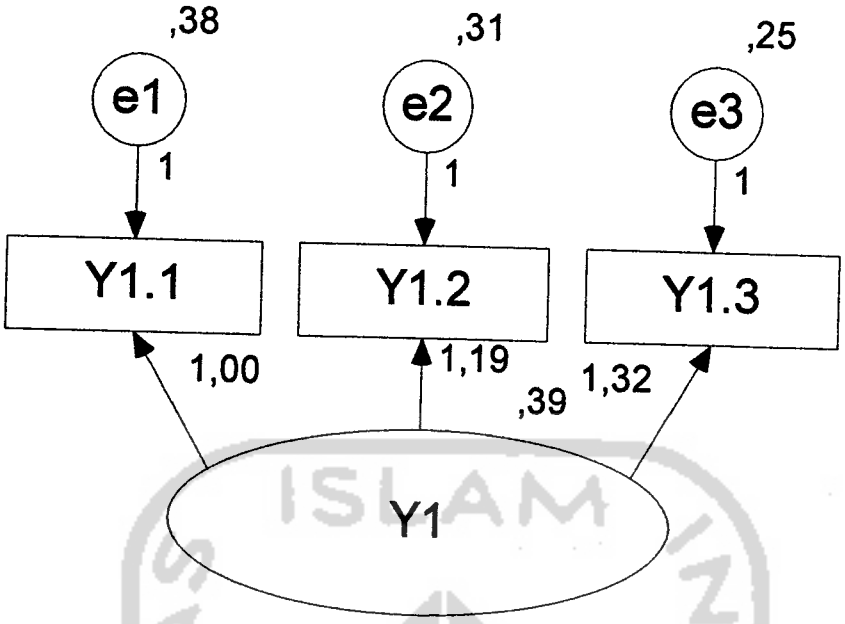
CONFIRMATORY FACTOR ANALYSIS



Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
X1.1 <--- X1	1,000				
X1.2 <--- X1	,860	,204	4,223	***	par_1
X1.3 <--- X1	1,190	,190	6,252	***	par_2
X1.4 <--- X1	,949	,226	4,196	***	par_3
X1.5 <--- X1	,773	,208	3,713	***	par_4
X1.6 <--- X1	,661	,217	3,052	,002	par_5
X1.7 <--- X1	,397	,163	2,439	,015	par_6

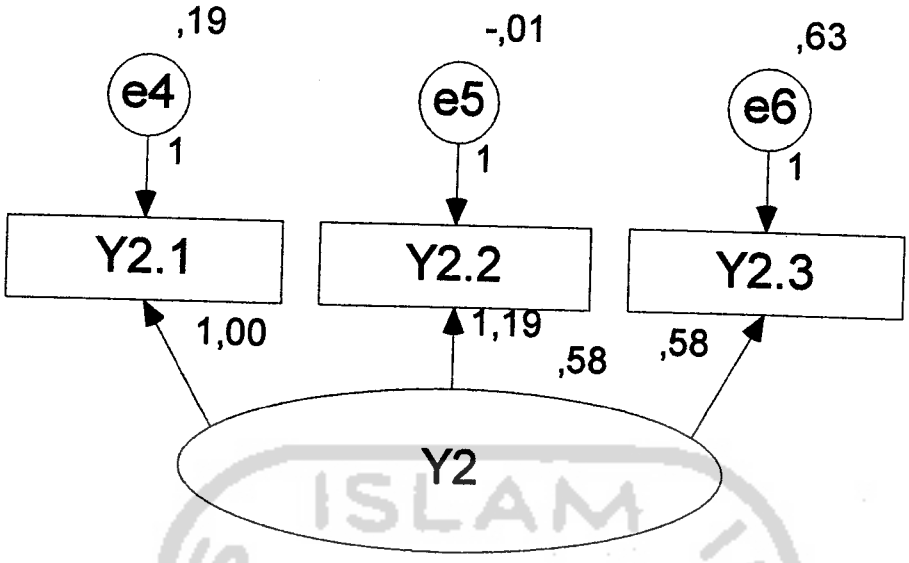
*** = closer to zero (0,000)



Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Y1.1 <--- Y1	1,000				
Y1.2 <--- Y1	1,186	,172	6,896	***	par_1
Y1.3 <--- Y1	1,321	,191	6,909	***	par_2

*** = Closer to zero (0,000)



Regression Weights: (Group number 1 - Default model)

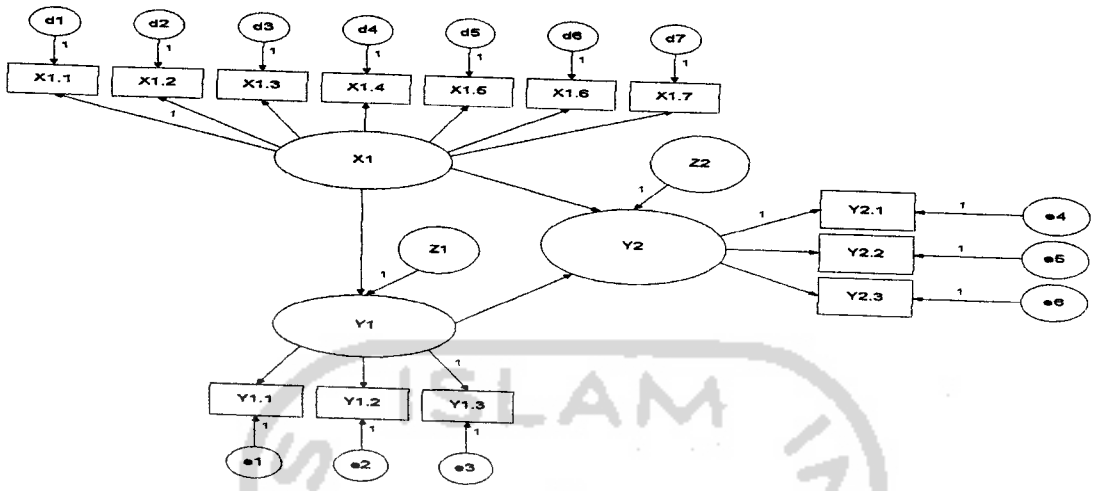
	Estimate	S.E.	C.R.	P	Label
Y2.1 <--- Y2	1,000				
Y2.2 <--- Y2	1,190	,138	8,601	***	par_1
Y2.3 <--- Y2	,584	,109	5,344	***	par_2

*** = closer to zero (0,000)

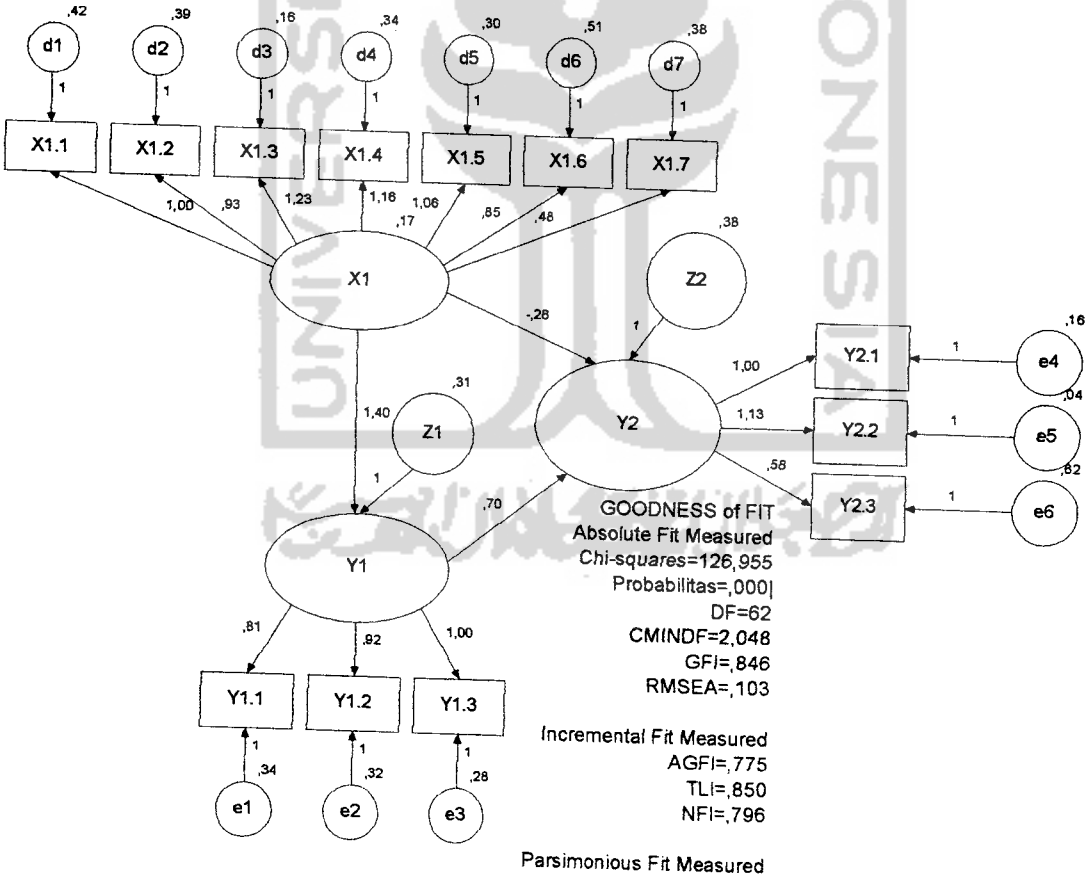
APPENDICES D

STRUCTURAL EQUATION MODELING *BEFORE* MODIFICATION INDICHES

STRUCTURAL EQUATION MODELING



RESULT OF STRUCTURAL EQUATION MODELING



GOODNESS of FIT
Absolute Fit Measured
Chi-squares=126,955
Probabilitas=,000
DF=62
CMINDF=2,048
GFI=,846
RMSEA=,103

Incremental Fit Measured
AGFI=,775
TLI=,850
NFI=,796

Parsimonious Fit Measured
PNFI=,633
PGFI=,577

Date and Time

Date: 05 Juni 2007
Time: 19:34:54

Notes for Group (Group number 1)

The model is recursive.
Sample size = 100

Variable Summary (Group number 1)

Your model contains the following variables (Group number 1)

Observed, endogenous variables
X1.1
X1.2
X1.3
X1.4
X1.5
X1.6
X1.7
Y1.3
Y1.2
Y1.1
Y2.1
Y2.2
Y2.3
Unobserved, endogenous variables
Y1
Y2
Unobserved, exogenous variables
X1
d1
d2
d3
d4
d5
d6
d7
e3

e2
e1
e4
e5
e6
Z1
Z2

Variable counts (Group number 1)

Number of variables in your model:	31
Number of observed variables:	13
Number of unobserved variables:	18
Number of exogenous variables:	16
Number of endogenous variables:	15

Parameter summary (Group number 1)

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed	18	0	0	0	0	18
Labeled	0	0	0	0	0	0
Unlabeled	13	0	16	0	0	29
Total	31	0	16	0	0	47

Assessment of normality (Group number 1)

Variable	min	max	skew	c.r.	kurtosis	c.r.
Y2.3	1,000	5,000	-,137	-,558	-,264	-,539
Y2.2	1,000	5,000	,330	1,346	-,356	-,726
Y2.1	2,000	5,000	,468	1,909	-,810	-1,654
Y1.1	2,000	5,000	-,153	-,624	-,672	-1,371
Y1.2	2,000	5,000	-,149	-,607	-,944	-1,926
Y1.3	1,000	5,000	-,072	-,294	-,694	-1,417
X1.7	3,000	5,000	-,108	-,442	-,639	-1,304
X1.6	1,000	5,000	,492	2,009	,426	,869
X1.5	1,000	5,000	,000	,000	,759	1,549
X1.4	2,000	5,000	,194	,793	-,419	-,855
X1.3	2,000	5,000	,298	1,218	-,485	-,991

Variable	min	max	skew	c.r.	kurtosis	c.r.
X1.2	2,000	5,000	,269	1,098	-,506	-1,033
X1.1	2,000	7,000	,980	4,000	3,339	6,816
Multivariate					22,482	5,692

Observations farthest from the centroid (Mahalanobis distance) (Group number 1)

Observation number	Mahalanobis d-squared	p1	p2
44	35,157	,001	,077
7	28,894	,007	,148
3	28,458	,008	,044
43	28,128	,009	,012
64	27,091	,012	,008
47	26,896	,013	,002
34	25,585	,019	,003
59	23,259	,039	,040
41	23,236	,039	,016
51	21,351	,066	,126
67	20,928	,074	,124
45	20,784	,077	,085
50	19,995	,095	,156
56	19,939	,097	,102
53	19,748	,102	,081
13	19,528	,108	,069
85	19,528	,108	,038
86	18,939	,125	,070
14	18,939	,125	,040
60	18,839	,128	,028
10	18,505	,139	,034
52	18,403	,143	,024
61	18,402	,143	,013
36	18,183	,151	,013
29	18,072	,155	,009
65	17,788	,166	,011
42	17,788	,166	,006
5	17,276	,187	,015
62	17,115	,194	,014
24	16,381	,229	,062
96	16,381	,229	,039
76	15,501	,277	,198

Observation number	Mahalanobis d-squared	p1	p2
58	15,251	,292	,231
66	14,615	,332	,470
48	14,532	,337	,432
70	13,889	,382	,707
49	13,782	,389	,689
54	13,610	,402	,707
46	13,594	,403	,641
79	13,392	,418	,678
15	12,706	,471	,907
87	12,706	,471	,868
38	12,557	,483	,876
97	12,284	,505	,918
25	12,284	,505	,883
91	12,163	,514	,882
19	12,163	,514	,838
9	12,113	,518	,807
74	12,058	,523	,776
82	11,755	,548	,856
31	11,684	,554	,837
21	11,416	,576	,891
93	11,416	,576	,849
73	11,386	,578	,811
23	10,783	,629	,958
95	10,783	,629	,936
69	10,474	,655	,969
4	10,298	,669	,976
80	9,898	,702	,994
26	9,805	,710	,993
98	9,805	,710	,988
6	9,792	,711	,981
33	9,791	,711	,969
83	9,762	,713	,956
11	9,762	,713	,932
81	9,724	,716	,911
55	9,671	,721	,891
89	9,616	,725	,868
17	9,616	,725	,816
84	9,542	,731	,793
12	9,542	,731	,724
1	9,405	,742	,733
2	9,034	,770	,859

Observation number	Mahalanobis d-squared	p1	p2
77	9,012	,772	,813
18	8,928	,778	,791
90	8,928	,778	,718
75	8,910	,780	,646
78	7,304	,886	,999
68	7,042	,900	1,000
71	6,985	,903	,999
32	6,874	,909	,999
57	6,740	,915	,999
8	6,396	,931	1,000
72	6,086	,943	1,000
28	6,014	,946	1,000
100	6,014	,946	1,000
63	5,866	,951	1,000
94	5,548	,961	1,000
22	5,548	,961	,999
30	5,538	,961	,998
20	5,499	,963	,996
92	5,499	,963	,987
16	4,037	,991	1,000
88	4,037	,991	1,000
37	3,935	,992	1,000
35	3,707	,994	1,000
99	3,096	,998	1,000
27	3,096	,998	,998
39	2,943	,998	,985
40	2,943	,998	,829

Sample Moments (Group number 1)

Sample Covariances (Group number 1)

	Y2.3	Y2.2	Y2.1	Y1.1	Y1.2	Y1.3	X1.7	X1.6	X1.5	X1.4	X1.3	X1.2	X1.1
Y2.3	,830												
Y2.2	,406	,822											
Y2.1	,342	,696	,776										
Y1.1	,282	,382	,393	,767									
Y1.2	,142	,378	,315	,464	,862								
Y1.3	,306	,432	,386	,517	,613	,932							
X1.7	,090	-,054	-,113	,109	,045	,131	,418						
X1.6	,114	,274	,226	,200	,224	,254	,044	,640					

	Y2.3	Y2.2	Y2.1	Y1.1	Y1.2	Y1.3	X1.7	X1.6	X1.5	X1.4	X1.3	X1.2	X1.1
X1.5	,220	,220	,200	,275	,335	,340	,115	,160	,490				
X1.4	,033	,211	,218	,228	,277	,256	,076	,242	,255	,573			
X1.3	,073	,141	,138	,234	,252	,276	,081	,162	,175	,238	,413		
X1.2	,077	,029	,027	,159	,136	,139	,092	,148	,180	,159	,229	,536	
X1.1	-,019	,073	,038	,186	,202	,148	,143	,038	,125	,144	,299	,139	,589

Condition number = 43,448

Eigenvalues

3,521 1,204 ,719 ,664 ,555 ,390 ,372 ,336 ,274 ,232 ,192 ,111 ,081

Determinant of sample covariance matrix = ,000

Sample Correlations (Group number 1)

	Y2.3	Y2.2	Y2.1	Y1.1	Y1.2	Y1.3	X1.7	X1.6	X1.5	X1.4	X1.3	X1.2	X1.1
Y2.3	1,000												
Y2.2	,492	1,000											
Y2.1	,425	,871	1,000										
Y1.1	,353	,481	,509	1,000									
Y1.2	,168	,449	,385	,571	1,000								
Y1.3	,348	,494	,453	,611	,684	1,000							
X1.7	,153	-,091	-,199	,193	,075	,211	1,000						
X1.6	,156	,378	,321	,285	,302	,329	,085	1,000					
X1.5	,345	,347	,324	,448	,515	,503	,254	,286	1,000				
X1.4	,048	,308	,327	,345	,394	,350	,155	,400	,481	1,000			
X1.3	,125	,242	,243	,415	,422	,445	,194	,315	,389	,489	1,000		
X1.2	,115	,043	,042	,248	,200	,196	,194	,253	,351	,288	,488	1,000	
X1.1	-,027	,105	,056	,277	,284	,199	,289	,062	,233	,248	,606	,247	1,000

Condition number = 47,259

Eigenvalues

4,894 1,931 1,115 ,973 ,856 ,732 ,640 ,475 ,407 ,371 ,290 ,212 ,104

Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments: 91

Number of distinct parameters to be estimated: 29

Degrees of freedom (91 - 29): 62

Result (Default model)

Minimum was achieved

Chi-square = 126,955

Degrees of freedom = 62

Probability level = ,000

Estimates (Group number 1 - Default model)

Scalar Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Y1 <--- X1	1,397	,352	3,969	***	par_11
Y2 <--- X1	-,279	,328	-,850	,395	par_12
Y2 <--- Y1	,702	,183	3,830	***	par_13
X1.1 <--- X1	1,000				
X1.2 <--- X1	,928	,240	3,862	***	par_1
X1.3 <--- X1	1,226	,234	5,246	***	par_2
X1.4 <--- X1	1,164	,289	4,030	***	par_3
X1.5 <--- X1	1,063	,279	3,803	***	par_4
X1.6 <--- X1	,855	,270	3,167	,002	par_5
X1.7 <--- X1	,476	,187	2,549	,011	par_6
Y1.3 <--- Y1	1,000				
Y1.2 <--- Y1	,916	,107	8,580	***	par_7
Y1.1 <--- Y1	,813	,106	7,699	***	par_8
Y2.1 <--- Y2	1,000				
Y2.2 <--- Y2	1,128	,092	12,203	***	par_9
Y2.3 <--- Y2	,582	,108	5,394	***	par_10

Standardized Regression Weights: (Group number 1 - Default model)

	Estimate
Y1 <--- X1	,719
Y2 <--- X1	-,147
Y2 <--- Y1	,720
X1.1 <--- X1	,539
X1.2 <--- X1	,525
X1.3 <--- X1	,789
X1.4 <--- X1	,636
X1.5 <--- X1	,628
X1.6 <--- X1	,442
X1.7 <--- X1	,305
Y1.3 <--- Y1	,834
Y1.2 <--- Y1	,794
Y1.1 <--- Y1	,747

	Estimate
X1.1	,291

Matrices (Group number 1 - Default model)

Implied (for all variables) Covariances (Group number 1 - Default model)

	X1	Y1	Y2	Y2.3	Y2.2	Y2.1	Y1.1	Y1.2	Y1.3	X1.7	X1.6	X1.5	X1.4	X1.3	X1.2	X1.1
X1	,171															
Y1	,239	,648														
Y2	,120	,388	,616													
Y2.3	,070	,226	,359	,830												
Y2.2	,136	,438	,695	,404	,822											
Y2.1	,120	,388	,616	,359	,695	,776										
Y1.1	,195	,527	,316	,184	,356	,316	,767									
Y1.2	,219	,593	,356	,207	,401	,356	,482	,862								
Y1.3	,239	,648	,388	,226	,438	,388	,527	,593	,932							
X1.7	,082	,114	,057	,033	,065	,057	,093	,104	,114	,418						
X1.6	,146	,205	,103	,060	,116	,103	,166	,187	,205	,070	,640					
X1.5	,182	,254	,128	,074	,144	,128	,207	,233	,254	,087	,156	,490				
X1.4	,199	,279	,140	,081	,158	,140	,226	,255	,279	,095	,170	,212	,573			
X1.3	,210	,293	,148	,086	,166	,148	,239	,269	,293	,100	,180	,223	,244	,413		
X1.2	,159	,222	,112	,065	,126	,112	,181	,204	,222	,076	,136	,169	,185	,195	,536	
X1.1	,171	,239	,120	,070	,136	,120	,195	,219	,239	,082	,146	,182	,199	,210	,159	,589

Implied (for all variables) Correlations (Group number 1 - Default model)

	X1	Y1	Y2	Y2.3	Y2.2	Y2.1	Y1.1	Y1.2	Y1.3	X1.7	X1.6	X1.5	X1.4	X1.3	X1.2	X1.1
X1	1,000															
Y1	,719	1,000														
Y2	,370	,614	1,000													
Y2.3	,186	,308	,501	1,000												
Y2.2	,362	,600	,977	,489	1,000											
Y2.1	,330	,548	,891	,447	,870	1,000										
Y1.1	,537	,747	,459	,230	,448	,409	1,000									
Y1.2	,570	,794	,488	,244	,476	,435	,593	1,000								
Y1.3	,599	,834	,512	,257	,500	,456	,623	,662	1,000							
X1.7	,305	,219	,113	,057	,110	,101	,164	,174	,183	1,000						
X1.6	,442	,318	,164	,082	,160	,146	,237	,252	,265	,135	1,000					
X1.5	,628	,451	,233	,117	,227	,207	,337	,358	,376	,192	,278	1,000				
X1.4	,636	,457	,236	,118	,230	,210	,341	,363	,381	,194	,281	,400	1,000			
X1.3	,789	,567	,292	,147	,285	,261	,424	,450	,473	,241	,349	,496	,502	1,000		
X1.2	,525	,377	,195	,097	,190	,173	,282	,300	,315	,160	,232	,330	,334	,415	1,000	
X1.1	,539	,388	,200	,100	,195	,178	,289	,308	,323	,164	,239	,339	,343	,426	,283	1,000

Implied Covariances (Group number 1 - Default model)

	Y2.3	Y2.2	Y2.1	Y1.1	Y1.2	Y1.3	X1.7	X1.6	X1.5	X1.4	X1.3	X1.2	X1.1
Y2.3	,830												
Y2.2	,404	,822											
Y2.1	,359	,695	,776										
Y1.1	,184	,356	,316	,767									
Y1.2	,207	,401	,356	,482	,862								
Y1.3	,226	,438	,388	,527	,593	,932							
X1.7	,033	,065	,057	,093	,104	,114	,418						
X1.6	,060	,116	,103	,166	,187	,205	,070	,640					

	Y2.3	Y2.2	Y2.1	Y1.1	Y1.2	Y1.3	X1.7	X1.6	X1.5	X1.4	X1.3	X1.2	X1.1
X1.5	,074	,144	,128	,207	,233	,254	,087	,156	,490				
X1.4	,081	,158	,140	,226	,255	,279	,095	,170	,212	,573			
X1.3	,086	,166	,148	,239	,269	,293	,100	,180	,223	,244	,413		
X1.2	,065	,126	,112	,181	,204	,222	,076	,136	,169	,185	,195	,536	
X1.1	,070	,136	,120	,195	,219	,239	,082	,146	,182	,199	,210	,159	,589

Implied Correlations (Group number 1 - Default model)

	Y2.3	Y2.2	Y2.1	Y1.1	Y1.2	Y1.3	X1.7	X1.6	X1.5	X1.4	X1.3	X1.2	X1.1
Y2.3	1,000												
Y2.2	,489	1,000											
Y2.1	,447	,870	1,000										
Y1.1	,230	,448	,409	1,000									
Y1.2	,244	,476	,435	,593	1,000								
Y1.3	,257	,500	,456	,623	,662	1,000							
X1.7	,057	,110	,101	,164	,174	,183	1,000						
X1.6	,082	,160	,146	,237	,252	,265	,135	1,000					
X1.5	,117	,227	,207	,337	,358	,376	,192	,278	1,000				
X1.4	,118	,230	,210	,341	,363	,381	,194	,281	,400	1,000			
X1.3	,147	,285	,261	,424	,450	,473	,241	,349	,496	,502	1,000		
X1.2	,097	,190	,173	,282	,300	,315	,160	,232	,330	,334	,415	1,000	
X1.1	,100	,195	,178	,289	,308	,323	,164	,239	,339	,343	,426	,283	1,000

Residual Covariances (Group number 1 - Default model)

	Y2.3	Y2.2	Y2.1	Y1.1	Y1.2	Y1.3	X1.7	X1.6	X1.5	X1.4	X1.3	X1.2	X1.1
Y2.3	,000												
Y2.2	,002	,000											
Y2.1	-,017	,000	,000										
Y1.1	,098	,026	,077	,000									
Y1.2	-,064	-,023	-,041	-,018	,000								
Y1.3	,080	-,006	-,003	-,010	,020	,000							
X1.7	,057	-,118	-,171	,017	-,059	,017	,000						
X1.6	,054	,158	,123	,034	,037	,049	-,026	,000					
X1.5	,146	,076	,072	,068	,102	,086	,028	,004	,000				
X1.4	-,048	,053	,078	,002	,022	-,022	-,019	,072	,043	,000			
X1.3	-,013	-,025	-,010	-,005	-,017	-,017	-,019	-,018	-,048	-,006	,000		
X1.2	,012	-,097	-,085	-,022	-,068	-,084	,016	,012	,011	-,026	,034	,000	
X1.1	-,089	-,063	-,082	-,008	-,017	-,092	,062	-,108	-,057	-,056	,089	-,020	,000

Standardized Residual Covariances (Group number 1 - Default model)

	Y2.3	Y2.2	Y2.1	Y1.1	Y1.2	Y1.3	X1.7	X1.6	X1.5	X1.4	X1.3	X1.2	X1.1
Y2.3	,000												
Y2.2	,021	,000											
Y2.1	-,192	,002	,000										
Y1.1	1,195	,297	,923	,000									
Y1.2	-,736	-,242	-,457	-,186	,000								
Y1.3	,882	-,057	-,030	-,097	,186	,000							

	Y2.3	Y2.2	Y2.1	Y1.1	Y1.2	Y1.3	X1.7	X1.6	X1.5	X1.4	X1.3	X1.2	X1.1
X1.7	,962	-1,995	-2,967	,292	-,972	,273	,000						
X1.6	,736	2,139	1,719	,465	,475	,614	-,491	,000					
X1.5	2,256	1,157	1,139	1,049	1,471	1,179	,611	,075	,000				
X1.4	-,692	,751	1,134	,029	,287	-,286	-,384	1,131	,752	,000			
X1.3	-,212	-,414	-,165	-,081	-,258	-,250	-,449	-,320	-,954	-,115	,000		
X1.2	,175	-1,433	-1,286	-,324	-,950	-1,122	,333	,199	,202	-,439	,673	,000	
X1.1	-1,263	-,884	-1,190	-,115	-,226	-1,171	1,221	-1,710	-1,001	-,899	1,650	-,349	,000

Factor Score Weights (Group number 1 - Default model)

	Y2.3	Y2.2	Y2.1	Y1.1	Y1.2	Y1.3	X1.7	X1.6	X1.5	X1.4	X1.3	X1.2	X1.1
X1	,000	,000	,000	,028	,033	,040	,037	,048	,104	,099	,229	,070	,070
Y1	,003	,103	,022	,202	,243	,297	,014	,019	,041	,039	,091	,028	,028
Y2	,022	,695	,147	,008	,010	,012	,000	,000	,000	,000	,000	,000	,000

Total Effects (Group number 1 - Default model)

	X1	Y1	Y2
Y1	1,397	,000	,000
Y2	,703	,702	,000
Y2.3	,409	,409	,582
Y2.2	,792	,792	1,128
Y2.1	,703	,702	1,000
Y1.1	1,136	,813	,000
Y1.2	1,279	,916	,000
Y1.3	1,397	1,000	,000
X1.7	,476	,000	,000
X1.6	,855	,000	,000
X1.5	1,063	,000	,000
X1.4	1,164	,000	,000
X1.3	1,226	,000	,000
X1.2	,928	,000	,000
X1.1	1,000	,000	,000

Standardized Total Effects (Group number 1 - Default model)

	X1	Y1	Y2
Y1	,719	,000	,000
Y2	,370	,720	,000
Y2.3	,186	,361	,501
Y2.2	,362	,703	,977
Y2.1	,330	,642	,891
Y1.1	,537	,747	,000
Y1.2	,570	,794	,000

	X1	Y1	Y2
Y1.3	,599	,834	,000
X1.7	,305	,000	,000
X1.6	,442	,000	,000
X1.5	,628	,000	,000
X1.4	,636	,000	,000
X1.3	,789	,000	,000
X1.2	,525	,000	,000
X1.1	,539	,000	,000

Direct Effects (Group number 1 - Default model)

	X1	Y1	Y2
Y1	1,397	,000	,000
Y2	-,279	,702	,000
Y2.3	,000	,000	,582
Y2.2	,000	,000	1,128
Y2.1	,000	,000	1,000
Y1.1	,000	,813	,000
Y1.2	,000	,916	,000
Y1.3	,000	1,000	,000
X1.7	,476	,000	,000
X1.6	,855	,000	,000
X1.5	1,063	,000	,000
X1.4	1,164	,000	,000
X1.3	1,226	,000	,000
X1.2	,928	,000	,000
X1.1	1,000	,000	,000

Standardized Direct Effects (Group number 1 - Default model)

	X1	Y1	Y2
Y1	,719	,000	,000
Y2	-,147	,720	,000
Y2.3	,000	,000	,501
Y2.2	,000	,000	,977
Y2.1	,000	,000	,891
Y1.1	,000	,747	,000
Y1.2	,000	,794	,000
Y1.3	,000	,834	,000
X1.7	,305	,000	,000
X1.6	,442	,000	,000

	X1	Y1	Y2
X1.5	,628	,000	,000
X1.4	,636	,000	,000
X1.3	,789	,000	,000
X1.2	,525	,000	,000
X1.1	,539	,000	,000

Indirect Effects (Group number 1 - Default model)

	X1	Y1	Y2
Y1	,000	,000	,000
Y2	,982	,000	,000
Y2.3	,409	,409	,000
Y2.2	,792	,792	,000
Y2.1	,703	,702	,000
Y1.1	1,136	,000	,000
Y1.2	1,279	,000	,000
Y1.3	1,397	,000	,000
X1.7	,000	,000	,000
X1.6	,000	,000	,000
X1.5	,000	,000	,000
X1.4	,000	,000	,000
X1.3	,000	,000	,000
X1.2	,000	,000	,000
X1.1	,000	,000	,000

Standardized Indirect Effects (Group number 1 - Default model)

	X1	Y1	Y2
Y1	,000	,000	,000
Y2	,517	,000	,000
Y2.3	,186	,361	,000
Y2.2	,362	,703	,000
Y2.1	,330	,642	,000
Y1.1	,537	,000	,000
Y1.2	,570	,000	,000
Y1.3	,599	,000	,000
X1.7	,000	,000	,000
X1.6	,000	,000	,000
X1.5	,000	,000	,000
X1.4	,000	,000	,000
X1.3	,000	,000	,000

	X1	Y1	Y2
X1.2	,000	,000	,000
X1.1	,000	,000	,000

Modification Indices (Group number 1 - Default model)

Covariances: (Group number 1 - Default model)

	M.I.	Par Change
e1 <--> e4	4,461	,059
e2 <--> e6	4,070	-,103
d7 <--> Z2	6,957	-,110
d7 <--> e6	5,611	,117
d7 <--> e4	8,295	-,078
d6 <--> Z2	5,887	,119
d5 <--> Z1	8,945	,119
d5 <--> e6	5,415	,107
d4 <--> e6	4,159	-,101
d3 <--> d5	7,405	-,072
d1 <--> d6	6,054	-,121
d1 <--> d3	17,463	,129

Variances: (Group number 1 - Default model)

	M.I.	Par Change

Regression Weights: (Group number 1 - Default model)

	M.I.	Par Change
Y2.3 <--- X1.7	5,456	,288
Y2.1 <--- X1.7	7,204	-,181
Y1.2 <--- Y2.3	4,118	-,143
X1.7 <--- Y2	5,067	-,182
X1.7 <--- Y2.2	4,494	-,146
X1.7 <--- Y2.1	10,077	-,225
X1.6 <--- Y2	5,749	,229
X1.6 <--- Y2.2	6,131	,201
X1.6 <--- X1.1	4,007	-,192
X1.5 <--- Y2.3	8,153	,182
X1.5 <--- Y1.2	4,266	,129
X1.3 <--- X1.5	4,179	-,137

	M.I.	Par Change
X1.3 <--- X1.1	11,857	,210
X1.1 <--- X1.6	4,684	-,182
X1.1 <--- X1.3	4,874	,231

Minimization History (Default model)

Iteration		Negative eigenvalues	Condition #	Smallest eigenvalue	Diameter	F	NTries	Ratio
0	e	6		-,471	9999,000	628,731	0	9999,000
1	e	4		-,416	2,434	313,466	20	,493
2	e	2		-,051	,587	211,204	5	,989
3	e	1		-,040	,234	184,817	5	,711
4	e	0	198,558		,803	139,858	8	,832
5	e	0	168,773		,418	131,735	2	,000
6	e	0	262,790		,396	127,686	1	1,161
7	e	0	398,014		,280	127,037	1	1,140
8	e	0	526,154		,110	126,958	1	1,094
9	e	0	569,479		,026	126,955	1	1,023
10	e	0	574,180		,001	126,955	1	1,001

Pairwise Parameter Comparisons (Default model)

Variance-covariance Matrix of Estimates (Default model)

	par_1	par_2	par_3	par_4	par_5	par_6	par_7	par_8	par_9	par_10	par_11	par_12	par_13	par_14	par_15	par_16
par_1	,058															
par_2	,035	,055														
par_3	,039	,046	,083													
par_4	,038	,041	,057	,078												
par_5	,031	,035	,047	,044	,073											
par_6	,015	,016	,020	,021	,015	,035										
par_7	,000	,000	,000	,000	,000	,000	,011									
par_8	,000	,000	,000	,000	,000	,000	,004	,011								
par_9	,000	,000	,000	,000	,000	,000	,000	,000	,009							
par_10	,000	,000	,000	,000	,000	,000	,000	,000	,002	,012						
par_11	,046	,054	,070	,070	,055	,025	-,007	-,007	,000	,000	,124					
par_12	-,008	-,009	-,006	-,009	-,003	-,008	-,001	-,003	,002	,001	-,019	,108				
par_13	,000	-,001	-,002	,000	-,002	,001	,004	,005	-,005	-,001	-,003	-,047	,034			
par_14	-,011	-,013	-,015	-,015	-,012	-,006	,000	,000	,000	,000	-,019	,003	,000	,005		
par_15	-,001	-,001	-,003	-,005	-,003	-,001	-,004	-,004	,000	,000	-,005	,007	-,006	,001	,008	
par_16	,000	,000	,000	,000	,000	,000	,000	,000	-,003	-,001	,000	,005	-,002	,000	,000	,006
par_17	,003	,003	,006	,006	,005	,002	,000	,000	,000	,000	,007	,000	,000	-,001	-,001	,000
par_18	-,002	,000	,001	,001	,000	,000	,000	,000	,000	,000	,001	,000	,000	,000	,000	,000
par_19	,002	,000	,004	,005	,003	,002	,000	,000	,000	,000	,005	,000	,000	-,001	-,001	,000
par_20	-,001	-,001	-,004	-,003	-,002	-,001	,000	,000	,000	,000	-,003	-,001	,001	,001	,000	,000
par_21	-,001	-,001	-,003	-,005	-,003	-,001	,000	,000	,000	,000	-,005	,000	,000	,001	,001	,000
par_22	-,001	-,001	-,002	-,002	-,004	,000	,000	,000	,000	,000	-,003	-,001	,001	,000	,000	,000
par_23	,000	,000	,000	,000	,000	-,001	,000	,000	,000	,000	,000	,001	,000	,000	,000	,000
par_24	,000	,000	,000	,000	,000	,000	,002	,002	,000	,000	-,001	-,003	,003	,000	-,002	,000
par_25	,000	,000	,000	,000	,000	,000	-,002	,000	,000	,000	,000	-,002	,001	,000	,000	,000
par_26	,000	,000	,000	,000	,000	,000	,000	-,002	,000	,000	,001	,001	-,001	,000	,000	,000
par_27	,000	,000	,000	,000	,000	,000	,000	,000	,002	,000	,000	,001	-,002	,000	,000	,000
par_28	,000	,000	,000	,000	,000	,000	,000	,000	-,003	,000	,000	-,001	,002	,000	,000	,000
par_29	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000

Continue....

	par_17	par_19	par_20	par_21	par_22	par_23	par_24	par_25	par_26	par_27	par_28	par_29
par_1												
par_2												
par_3												
par_4												
par_5												
par_6												
par_7												
par_8												
par_9												
par_10												
par_11												
par_12												
par_13												
par_14												
par_15												
par_16												
par_17	,005											
par_18	,000											
par_19	,001	,002										
par_20	-,001	,000	,003									
par_21	-,001	-,001	,000	,003								
par_22	,000	,000	,000	,000	,006							
par_23	,000	,000	,000	,000	,000	,003						
par_24	,000	,000	,000	,000	,000	,000	,004					
par_25	,000	,000	,000	,000	,000	,000	,000	,004				
par_26	,000	,000	,000	,000	,000	,000	-,001	,000	,004			
par_27	,000	,000	,000	,000	,000	,000	,000	,000	,000	,002		
par_28	,000	,000	,000	,000	,000	,000	,000	,000	,000	-,002	,002	
par_29	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,008

Correlations of Estimates (Default model)

	par_1	par_2	par_3	par_4	par_5	par_6	par_7	par_8	par_9	par_10	par_11	par_12	par_13	par_14	par_15	par_16
par_1	1,000															
par_2	,630	1,000														
par_3	,567	,675	1,000													
par_4	,565	,633	,707	1,000												
par_5	,478	,554	,598	,587	1,000											
par_6	,330	,370	,372	,396	,305	1,000										
par_7	-,004	-,009	,005	,006	,000	-,013	1,000									
par_8	-,003	-,011	-,007	-,005	-,009	-,002	,397	1,000								
par_9	,000	,001	,002	,002	,002	-,002	,026	-,041	1,000							
par_10	,000	,000	,000	,000	,000	,000	,000	-,005	,240	1,000						
par_11	,549	,660	,684	,717	,583	,380	-,188	-,176	,002	,001	1,000					
par_12	-,104	-,111	-,065	-,098	-,029	-,124	-,015	-,086	,080	,018	-,168	1,000				
par_13	-,004	-,018	-,037	-,009	-,046	,037	,199	,284	-,303	-,075	-,039	-,781	1,000			
par_14	-,663	-,799	-,775	-,771	-,645	-,431	,001	,007	-,001	,000	-,768	,115	,015	1,000		
par_15	-,035	-,031	-,123	-,191	-,124	-,060	-,390	-,392	,008	,002	-,149	,253	-,379	,126	1,000	
par_16	,003	,007	,017	,012	,020	-,009	,000	-,052	-,392	-,158	,011	,199	-,150	-,011	,060	1,000
par_17	,188	,155	,280	,304	,256	,117	-,001	-,007	,001	,000	,280	-,011	-,015	-,263	-,126	,010
par_18	-,115	-,014	,044	,042	,029	,005	,004	-,004	,001	,000	,059	,018	-,009	-,021	-,080	,007
par_19	,164	,023	,341	,434	,304	,203	,019	,007	,002	,000	,361	-,025	,005	-,298	-,246	,011
par_20	-,060	-,057	-,261	-,164	-,150	-,047	-,011	,002	-,002	,000	-,125	-,056	,049	,132	,042	-,017
par_21	-,112	-,043	-,217	-,353	-,177	-,126	-,013	-,002	-,002	,000	-,246	,018	-,005	,194	,180	-,007
par_22	-,057	-,047	-,106	-,098	-,176	-,032	-,001	,004	-,001	,000	-,096	-,045	,037	,090	,044	-,013
par_23	,005	,022	,014	,000	,014	-,077	,007	-,001	,001	,000	,007	,036	-,025	-,010	-,002	,008
par_24	-,006	-,016	-,002	,001	-,007	-,011	,272	,311	-,014	-,004	-,064	-,155	,262	,007	-,312	-,091
par_25	,004	,005	-,011	-,011	-,006	,016	-,250	,054	-,064	-,004	,020	-,101	,116	,003	-,013	-,078
par_26	,001	,008	,011	,009	,011	-,005	-,003	-,265	,066	,006	,030	,050	-,098	-,008	,067	,031
par_27	,000	,001	,003	,002	,002	-,002	,029	-,047	,615	,088	,003	,061	-,206	-,002	,009	-,104
par_28	,000	-,001	-,003	-,003	-,003	,002	-,035	,055	-,715	-,078	-,003	-,071	,241	,002	-,010	,085
par_29	,000	,000	,000	,000	,000	,000	,004	-,004	,044	-,027	,000	,005	-,016	,000	,000	-,001

Continue...

	par_17	par_18	par_19	par_20	par_21	par_22	par_23	par_24	par_25	par_26	par_27	par_28	par_29
par_1													
par_2													
par_3													
par_4													
par_5													
par_6													
par_7													
par_8													
par_9													
par_10													
par_11													
par_12													
par_13													
par_14													
par_15													
par_16													
par_17	1,000												
par_18	,020	1,000											
par_19	,297	,086	1,000										
par_20	-,131	-,054	-,198	1,000									
par_21	-,193	-,049	-,391	,119	1,000								
par_22	-,089	-,016	-,116	,067	,055	1,000							
par_23	,010	,003	-,028	-,011	,015	-,008	1,000						
par_24	-,007	,000	,021	-,007	-,012	,003	,004	1,000					
par_25	-,003	-,008	-,021	,017	,017	,004	-,010	-,042	1,000				
par_26	,008	,007	,001	-,009	-,005	-,005	,005	-,155	-,128	1,000			
par_27	,002	,002	,002	-,003	-,002	-,001	,001	-,016	-,073	,075	1,000		
par_28	-,002	-,002	-,003	,003	,003	,002	-,002	,018	,087	-,088	-,791	1,000	
par_29	,000	,000	,000	,000	,000	,000	,000	,000	-,009	,007	,045	-,064	1,000

Critical Ratios for Differences between Parameters (Default model)

	par_1	par_2	par_3	par_4	par_5	par_6	par_7	par_8	par_9	par_10	par_11	par_12	par_13	par_14	par_15	par_16
par_1	,000															
par_2	1,457	,000														
par_3	,941	-,285	,000													
par_4	,548	-,729	-,465	,000												
par_5	-,281	-1,545	-1,230	-,831	,000											
par_6	-1,801	-3,133	-2,460	-2,190	-1,365	,000										
par_7	-,049	-1,203	-,808	-,493	,209	2,031	,000									
par_8	-,440	-1,604	-1,139	-,835	-,145	1,568	-,881	,000								
par_9	,774	-,389	-,119	,222	,957	3,125	1,524	2,201	,000							
par_10	-1,316	-2,502	-1,889	-1,606	-,940	,489	-2,201	-1,528	-4,403	,000						
par_11	1,573	,649	,895	1,356	1,851	2,791	1,246	1,519	,741	2,216	,000					
par_12	-2,831	-3,553	-3,199	-2,972	-2,630	-1,901	-3,445	-3,090	-4,215	-2,504	-3,223	,000				
par_13	-,746	-1,746	-1,327	-1,073	-,457	,880	-1,104	-,600	-1,858	,550	-1,723	2,023	,000			
par_14	-2,605	-3,616	-2,878	-2,658	-2,145	-1,354	-5,864	-5,107	-8,294	-3,207	-3,010	1,375	-2,724	,000		
par_15	-2,369	-3,605	-2,718	-2,420	-1,836	-,767	-3,666	-3,056	-6,337	-1,911	-2,882	1,865	-1,670	1,338	,000	
par_16	-2,186	-3,457	-2,644	-2,373	-1,711	-,489	-4,098	-3,260	-5,312	-1,442	-2,838	2,039	-1,555	1,989	,557	,000
par_17	-2,152	-3,465	-2,688	-2,418	-1,675	-,305	-3,913	-3,120	-6,157	-1,280	-2,888	2,073	-1,445	2,247	,868	,394
par_18	-2,124	-3,460	-2,653	-2,381	-1,699	-,451	-4,312	-3,489	-6,708	-1,568	-2,855	2,005	-1,625	2,342	,663	,109
par_19	-3,258	-4,530	-3,632	-3,431	-2,684	-1,752	-6,698	-5,824	-9,638	-3,697	-3,657	1,310	-2,913	-,174	-1,468	-2,566
par_20	-2,343	-3,626	-2,662	-2,450	-1,806	-,682	-4,706	-3,918	-7,199	-1,964	-2,903	1,842	-1,905	2,019	,263	-,374
par_21	-2,506	-3,839	-2,843	-2,531	-1,963	-,895	-5,152	-4,353	-7,766	-2,366	-2,983	1,735	-2,120	1,591	-,175	-,859
par_22	-1,610	-2,846	-2,114	-1,842	-1,157	,188	-3,031	-2,275	-5,067	-,503	-2,399	2,330	-,954	3,459	1,729	1,249
par_23	-2,230	-3,544	-2,676	-2,400	-1,732	-,489	-4,479	-3,640	-6,962	-1,673	-2,861	1,989	-1,677	2,344	,621	,019
par_24	-2,586	-3,871	-2,973	-2,716	-2,054	-,969	-5,825	-5,033	-7,470	-2,371	-3,077	1,638	-2,353	1,210	-,232	-,894
par_25	-2,458	-3,755	-2,854	-2,592	-1,933	-,804	-4,378	-4,129	-7,053	-2,108	-3,028	1,757	-2,054	1,590	,048	-,571
par_26	-2,376	-3,677	-2,799	-2,533	-1,867	-,695	-4,681	-3,501	-7,344	-1,960	-2,976	1,869	-1,825	1,819	,247	-,392
par_27	-3,145	-4,484	-3,438	-3,193	-2,542	-1,648	-6,618	-5,618	-13,079	-3,740	-3,489	1,336	-2,751	-,140	-1,539	-2,359
par_28	-3,631	-4,976	-3,842	-3,611	-2,977	-2,271	-7,389	-6,812	-8,285	-4,469	-3,824	,946	-3,731	-1,584	-2,682	-3,894
par_29	-1,195	-2,412	-1,792	-1,502	-,819	,703	-2,111	-1,376	-4,017	,282	-2,135	2,651	-,392	3,982	2,426	2,071

Continue...

	par_17	par_18	par_19	par_20	par_21	par_22	par_23	par_24	par_25	par_26	par_27	par_28	par_29
par_1													
par_2													
par_3													
par_4													
par_5													
par_6													
par_7													
par_8													
par_9													
par_10													
par_11													
par_12													
par_13													
par_14													
par_15													
par_16													
par_17	,000												
par_18	-,329	,000											
par_19	-3,797	-3,327	,000										
par_20	-,799	-,545	2,400	,000									
par_21	-1,269	-1,103	1,781	-,598	,000								
par_22	,892	1,277	3,903	1,846	2,364	,000							
par_23	-,440	-,108	3,220	,472	1,079	-1,416	,000						
par_24	-1,415	-1,181	1,722	-,655	-,145	-2,292	-1,127	,000					
par_25	-1,062	-,794	2,172	-,264	,272	-1,967	-,721	,378	,000				
par_26	-,853	-,567	2,507	-,019	,526	-1,766	-,483	,581	,223	,000			
par_27	-3,152	-3,059	,070	-2,484	-1,966	-3,964	-3,113	-1,599	-2,017	-2,478	,000		
par_28	-4,493	-4,515	-1,858	-4,008	-3,572	-5,195	-4,640	-3,106	-3,715	-3,711	-1,394	,000	
par_29	1,801	2,163	4,732	2,625	3,107	,900	2,305	3,068	2,763	2,610	4,709	5,576	,000

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	29	126,955	62	,000	2,048
Saturated model	91	,000	0		
Independence model	13	621,568	78	,000	7,969

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	,057	,846	,775	,577
Saturated model	,000	1,000		
Independence model	,229	,404	,304	,346

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	,796	,743	,884	,850	,881
Saturated model	1,000		1,000		1,000
Independence model	,000	,000	,000	,000	,000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	,795	,633	,700
Saturated model	,000	,000	,000
Independence model	1,000	,000	,000

NCP

Model	NCP	LO 90	HI 90
Default model	64,955	36,547	101,135
Saturated model	,000	,000	,000
Independence model	543,568	467,864	626,745

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	1,282	,656	,369	1,022
Saturated model	,000	,000	,000	,000
Independence model	6,278	5,491	4,726	6,331

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	,103	,077	,128	,001
Independence model	,265	,246	,285	,000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	184,955	194,508	260,505	289,505
Saturated model	182,000	211,976	419,070	510,070
Independence model	647,568	651,850	681,435	694,435

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	1,868	1,581	2,234	1,965
Saturated model	1,838	1,838	1,838	2,141
Independence model	6,541	5,776	7,381	6,584

HOELTER

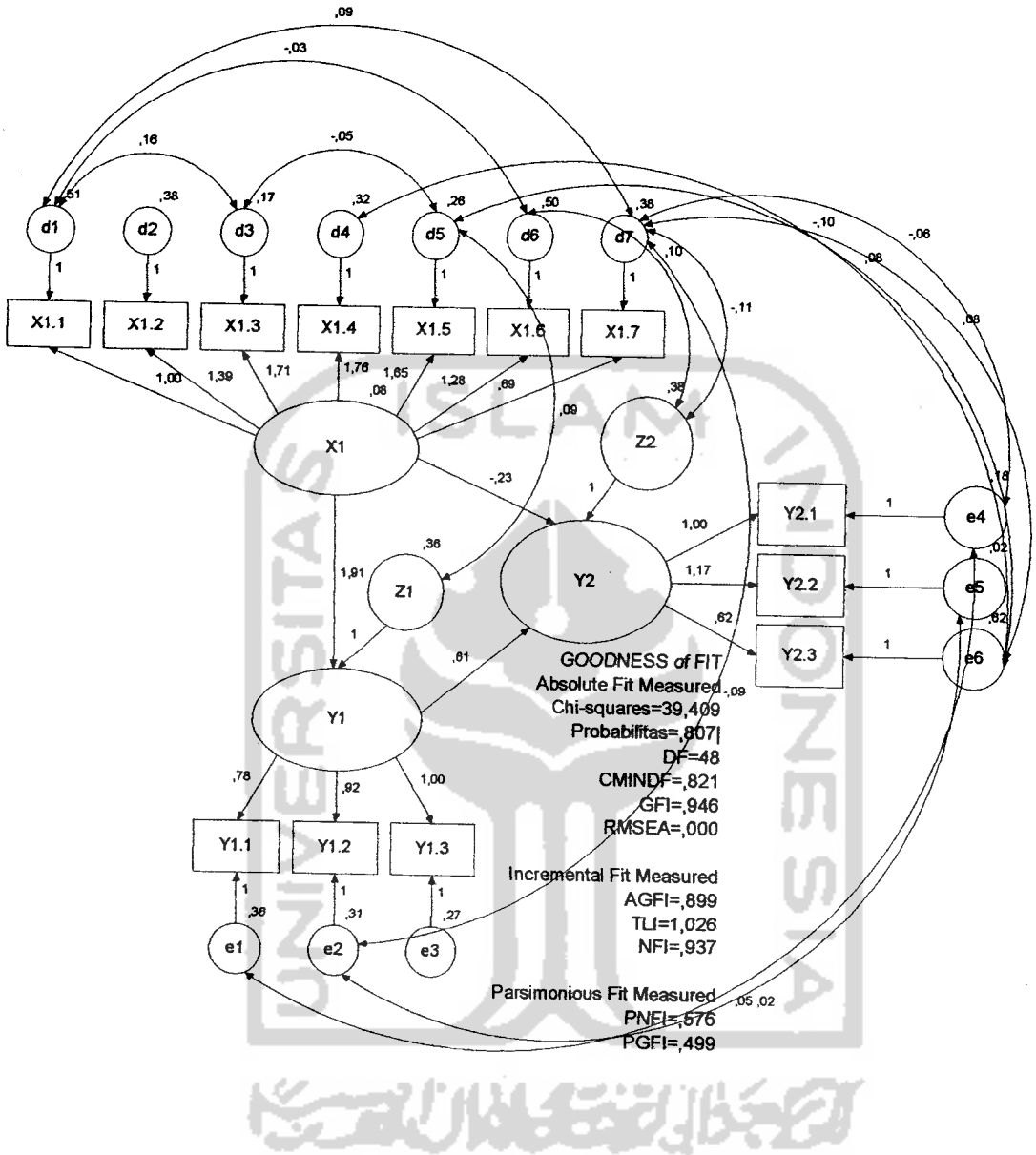
Model	HOELTER .05	HOELTER .01
Default model	64	71
Independence model	16	18

Execution time summary

Minimization:	,016
Miscellaneous:	,234
Bootstrap:	,000
Total:	,250

APPENDICES E

STRUCTURAL EQUATION MODELING *AFTER* MODIFICATION INDICHES



Analysis Summary

Date and Time

Date: 05 Juni 2007
Time: 20:21:45

Title

Amos q: 05 Juni 2007 08:21

Notes for Group (Group number 1)

The model is recursive.
Sample size = 100

Variable Summary (Group number 1)

Your model contains the following variables (Group number 1)

Observed, endogenous variables
X1.1
X1.2
X1.3
X1.4
X1.5
X1.6
X1.7
Y1.3
Y1.2
Y1.1
Y2.1
Y2.2
Y2.3
Unobserved, endogenous variables
Y1
Y2
Unobserved, exogenous variables
X1
d1
d2
d3
d4
d5
d6
d7
e3
e2
e1
e4
e5
e6
Z1
Z2

Variable counts (Group number 1)

Number of variables in your model:	31
Number of observed variables:	13
Number of unobserved variables:	18
Number of exogenous variables:	16
Number of endogenous variables:	15

Parameter summary (Group number 1)

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed	18	0	0	0	0	18
Labeled	0	0	0	0	0	0
Unlabeled	13	14	16	0	0	43
Total	31	14	16	0	0	61

Assessment of normality (Group number 1)

Variable	min	max	skew	c.r.	kurtosis	c.r.
Y2.3	1,000	5,000	-,137	-,558	-,264	-,539
Y2.2	1,000	5,000	,330	1,346	-,356	-,726
Y2.1	2,000	5,000	,468	1,909	-,810	-1,654
Y1.1	2,000	5,000	-,153	-,624	-,672	-1,371
Y1.2	2,000	5,000	-,149	-,607	-,944	-1,926
Y1.3	1,000	5,000	-,072	-,294	-,694	-1,417
X1.7	3,000	5,000	-,108	-,442	-,639	-1,304
X1.6	1,000	5,000	,492	2,009	,426	,869
X1.5	1,000	5,000	,000	,000	,759	1,549
X1.4	2,000	5,000	,194	,793	-,419	-,855
X1.3	2,000	5,000	,298	1,218	-,485	-,991
X1.2	2,000	5,000	,269	1,098	-,506	-1,033
X1.1	2,000	7,000	,980	4,000	3,339	6,816
Multivariate					22,482	5,692

Observations farthest from the centroid (Mahalanobis distance) (Group number 1)

Observation number	Mahalanobis d-squared	p1	p2
44	35,157	,001	,077
7	28,894	,007	,148

Observation number	Mahalanobis d-squared	p1	p2
3	28,458	,008	,044
43	28,128	,009	,012
64	27,091	,012	,008
47	26,896	,013	,002
34	25,585	,019	,003
59	23,259	,039	,040
41	23,236	,039	,016
51	21,351	,066	,126
67	20,928	,074	,124
45	20,784	,077	,085
50	19,995	,095	,156
56	19,939	,097	,102
53	19,748	,102	,081
13	19,528	,108	,069
85	19,528	,108	,038
86	18,939	,125	,070
14	18,939	,125	,040
60	18,839	,128	,028
10	18,505	,139	,034
52	18,403	,143	,024
61	18,402	,143	,013
36	18,183	,151	,013
29	18,072	,155	,009
65	17,788	,166	,011
42	17,788	,166	,006
5	17,276	,187	,015
62	17,115	,194	,014
24	16,381	,229	,062
96	16,381	,229	,039
76	15,501	,277	,198
58	15,251	,292	,231
66	14,615	,332	,470
48	14,532	,337	,432
70	13,889	,382	,707
49	13,782	,389	,689
54	13,610	,402	,707
46	13,594	,403	,641
79	13,392	,418	,678
15	12,706	,471	,907
87	12,706	,471	,868
38	12,557	,483	,876

Observation number	Mahalanobis d-squared	p1	p2
97	12,284	,505	,918
25	12,284	,505	,883
91	12,163	,514	,882
19	12,163	,514	,838
9	12,113	,518	,807
74	12,058	,523	,776
82	11,755	,548	,856
31	11,684	,554	,837
21	11,416	,576	,891
93	11,416	,576	,849
73	11,386	,578	,811
23	10,783	,629	,958
95	10,783	,629	,936
69	10,474	,655	,969
4	10,298	,669	,976
80	9,898	,702	,994
26	9,805	,710	,993
98	9,805	,710	,988
6	9,792	,711	,981
33	9,791	,711	,969
83	9,762	,713	,956
11	9,762	,713	,932
81	9,724	,716	,911
55	9,671	,721	,891
89	9,616	,725	,868
17	9,616	,725	,816
84	9,542	,731	,793
12	9,542	,731	,724
1	9,405	,742	,733
2	9,034	,770	,859
77	9,012	,772	,813
18	8,928	,778	,791
90	8,928	,778	,718
75	8,910	,780	,646
78	7,304	,886	,999
68	7,042	,900	1,000
71	6,985	,903	,999
32	6,874	,909	,999
57	6,740	,915	,999
8	6,396	,931	1,000
72	6,086	,943	1,000

Observation number	Mahalanobis d-squared	p1	p2
28	6,014	,946	1,000
100	6,014	,946	1,000
63	5,866	,951	1,000
94	5,548	,961	1,000
22	5,548	,961	,999
30	5,538	,961	,998
20	5,499	,963	,996
92	5,499	,963	,987
16	4,037	,991	1,000
88	4,037	,991	1,000
37	3,935	,992	1,000
35	3,707	,994	1,000
99	3,096	,998	1,000
27	3,096	,998	,998
39	2,943	,998	,985
40	2,943	,998	,829

Observations farthest from the centroid (Mahalanobis distance) (Group number 1)

Observation number	Mahalanobis d-squared	p1	p2
44	35,157	,001	,077
7	28,894	,007	,148
3	28,458	,008	,044
43	28,128	,009	,012
64	27,091	,012	,008
47	26,896	,013	,002
34	25,585	,019	,003
59	23,259	,039	,040
41	23,236	,039	,016
51	21,351	,066	,126
67	20,928	,074	,124
45	20,784	,077	,085
50	19,995	,095	,156
56	19,939	,097	,102
53	19,748	,102	,081
13	19,528	,108	,069
85	19,528	,108	,038
86	18,939	,125	,070
14	18,939	,125	,040
60	18,839	,128	,028
10	18,505	,139	,034
52	18,403	,143	,024
61	18,402	,143	,013

36	18,183	,151	,013
29	18,072	,155	,009
65	17,788	,166	,011
42	17,788	,166	,006
5	17,276	,187	,015
62	17,115	,194	,014
24	16,381	,229	,062
96	16,381	,229	,039
76	15,501	,277	,198
58	15,251	,292	,231
66	14,615	,332	,470
48	14,532	,337	,432
70	13,889	,382	,707
49	13,782	,389	,689
54	13,610	,402	,707
46	13,594	,403	,641
79	13,392	,418	,678
15	12,706	,471	,907
87	12,706	,471	,868
38	12,557	,483	,876
97	12,284	,505	,918
25	12,284	,505	,883
91	12,163	,514	,882
19	12,163	,514	,838
9	12,113	,518	,807
74	12,058	,523	,776
82	11,755	,548	,856
31	11,684	,554	,837
21	11,416	,576	,891
93	11,416	,576	,849
73	11,386	,578	,811
23	10,783	,629	,958
95	10,783	,629	,936
69	10,474	,655	,969
4	10,298	,669	,976
80	9,898	,702	,994
26	9,805	,710	,993
98	9,805	,710	,988
6	9,792	,711	,981
33	9,791	,711	,969
83	9,762	,713	,956
11	9,762	,713	,932
81	9,724	,716	,911
55	9,671	,721	,891
89	9,616	,725	,868
17	9,616	,725	,816

84	9,542	,731	,793
12	9,542	,731	,724
1	9,405	,742	,733
2	9,034	,770	,859
77	9,012	,772	,813
18	8,928	,778	,791
90	8,928	,778	,718
75	8,910	,780	,646
78	7,304	,886	,999
68	7,042	,900	1,000
71	6,985	,903	,999
32	6,874	,909	,999
57	6,740	,915	,999
8	6,396	,931	1,000
72	6,086	,943	1,000
28	6,014	,946	1,000
100	6,014	,946	1,000
63	5,866	,951	1,000
94	5,548	,961	1,000
22	5,548	,961	,999
30	5,538	,961	,998
20	5,499	,963	,996
92	5,499	,963	,987
16	4,037	,991	1,000
88	4,037	,991	1,000
37	3,935	,992	1,000
35	3,707	,994	1,000
99	3,096	,998	1,000
27	3,096	,998	,998
39	2,943	,998	,985
40	2,943	,998	,829

Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments:	91
Number of distinct parameters to be estimated:	43
Degrees of freedom (91 - 43):	48

Result (Default model)

Minimum was achieved
Chi-square = 39,409
Degrees of freedom = 48

Probability level = ,807

Estimates (Group number 1 - Default model)

Scalar Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	PLabel
Y1	<---	X1	1,909	,651	2,935	,003par_11
Y2	<---	X1	-,233	,402	-,581	,561par_12
Y2	<---	Y1	,608	,152	4,001	***par_13
X1.1	<---	X1	1,000			
X1.2	<---	X1	1,386	,474	2,922	,003par_1
X1.3	<---	X1	1,714	,451	3,800	***par_2
X1.4	<---	X1	1,762	,579	3,043	,002par_3
X1.5	<---	X1	1,652	,560	2,948	,003par_4
X1.6	<---	X1	1,284	,500	2,570	,010par_5
X1.7	<---	X1	,690	,280	2,469	,014par_6
Y1.3	<---	Y1	1,000			
Y1.2	<---	Y1	,921	,105	8,766	***par_7
Y1.1	<---	Y1	,775	,101	7,703	***par_8
Y2.1	<---	Y2	1,000			
Y2.2	<---	Y2	1,174	,097	12,123	***par_9
Y2.3	<---	Y2	,616	,106	5,820	***par_10

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
Y1	<---	X1	,673
Y2	<---	X1	-,088
Y2	<---	Y1	,648
X1.1	<---	X1	,373
X1.2	<---	X1	,544
X1.3	<---	X1	,768
X1.4	<---	X1	,665
X1.5	<---	X1	,681
X1.6	<---	X1	,461
X1.7	<---	X1	,307
Y1.3	<---	Y1	,844
Y1.2	<---	Y1	,802
Y1.1	<---	Y1	,726
Y2.1	<---	Y2	,877
Y2.2	<---	Y2	,990
Y2.3	<---	Y2	,514

Covariances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	PLabel

e1	<-->	e4	,053	,030	1,783	,075par_14
e2	<-->	e5	,024	,029	,830	,407par_15
d7	<-->	Z2	-,112	,043	-2,586	,010par_16
d7	<-->	e6	,082	,043	1,911	,056par_17
d7	<-->	e4	-,064	,028	-2,257	,024par_18
d6	<-->	Z2	,103	,048	2,170	,030par_19
d5	<-->	Z1	,091	,053	1,709	,087par_20
d5	<-->	e6	,082	,043	1,935	,053par_21
d4	<-->	e6	-,099	,050	-1,993	,046par_22
d3	<-->	d5	-,053	,027	-2,011	,044par_23
d1	<-->	d6	-,030	,047	-,630	,528par_24
d1	<-->	d3	,157	,046	3,445	***par_25
d1	<-->	d7	,093	,037	2,492	,013par_26
d7	<-->	e2	-,086	,038	-2,225	,026par_27

Correlations: (Group number 1 - Default model)

			Estimate
e1	<-->	e4	,210
e2	<-->	e5	,348
d7	<-->	Z2	-,295
d7	<-->	e6	,169
d7	<-->	e4	-,247
d6	<-->	Z2	,236
d5	<-->	Z1	,296
d5	<-->	e6	,206
d4	<-->	e6	-,222
d3	<-->	d5	-,256
d1	<-->	d6	-,059
d1	<-->	d3	,537
d1	<-->	d7	,212
d7	<-->	e2	-,249

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	PLabel
X1	,082	,051	1,622	,105par_28
Z1	,364	,096	3,776	***par_29
Z2	,379	,073	5,183	***par_30
d1	,509	,077	6,571	***par_31
d2	,377	,059	6,374	***par_32
d3	,168	,041	4,056	***par_33
d4	,323	,056	5,719	***par_34
d5	,260	,055	4,681	***par_35
d6	,503	,077	6,546	***par_36
d7	,378	,054	7,034	***par_37
e3	,268	,061	4,408	***par_38
e2	,313	,062	5,038	***par_39
e1	,359	,061	5,860	***par_40

e4	,176	,044	4,052	***par_41
e5	,016	,049	,317	,751par_42
e6	,618	,089	6,980	***par_43

Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
Y1	,452
Y2	,351
Y2.3	,264
Y2.2	,981
Y2.1	,768
Y1.1	,526
Y1.2	,643
Y1.3	,712
X1.7	,094
X1.6	,213
X1.5	,464
X1.4	,442
X1.3	,590
X1.2	,296
X1.1	,139

Matrices (Group number 1 - Default model)

Implied (for all variables) Covariances (Group number 1 - Default model)

	X1	Y1	Y2	Y2.3	Y2.2	Y2.1	Y1.1	Y1.2	Y1.3	X1.7	X1.6	X1.5	X1.4	X1.3	X1.2	X1.1
X1	,082															
Y1	,157	,664														
Y2	,076	,367	,585													
Y2.3	,047	,226	,360	,840												
Y2.2	,090	,431	,687	,423	,822											
Y2.1	,076	,367	,585	,360	,687	,761										
Y1.1	,122	,515	,284	,175	,334	,337	,758									
Y1.2	,145	,612	,338	,208	,421	,338	,474	,876								
Y1.3	,157	,664	,367	,226	,431	,367	,515	,612	,932							
X1.7	,057	,109	-,059	,045	-,069	-,123	,084	,014	,109	,417						
X1.6	,106	,202	,201	,124	,236	,201	,157	,186	,202	,073	,639					
X1.5	,136	,351	,182	,194	,213	,182	,272	,323	,351	,094	,175	,485				
X1.4	,145	,277	,135	-,016	,158	,135	,215	,256	,277	,100	,187	,240	,579			
X1.3	,141	,270	,131	,081	,154	,131	,209	,248	,270	,098	,181	,180	,249	,410		
X1.2	,114	,218	,106	,065	,124	,106	,169	,201	,218	,079	,147	,189	,201	,196	,536	
X1.1	,082	,157	,076	,047	,090	,076	,122	,145	,157	,150	,076	,136	,145	,298	,114	,591

Implied (for all variables) Correlations (Group number 1 - Default model)

	X1	Y1	Y2	Y2.3	Y2.2	Y2.1	Y1.1	Y1.2	Y1.3	X1.7	X1.6	X1.5	X1.4	X1.3	X1.2	X1.1
X1	1,000															
Y1	,673	1,000														
Y2	,348	,589	1,000													
Y2.	,179	,302	,514	1,000												

3													
Y2.2	,345	,583	,990	,509	1,000								
Y2.1	,305	,516	,877	,450	,868	1,000							
Y1.1	,488	,726	,427	,219	,423	,444	1,000						
Y1.2	,539	,802	,472	,243	,496	,414	,582	1,000					
Y1.3	,568	,844	,497	,255	,492	,436	,612	,677	1,000				
X1.7	,307	,207	-,120	,077	-,118	-,218	,150	,024	,174	1,000			
X1.6	,461	,310	,329	,169	,326	,289	,225	,249	,262	,142	1,000		
X1.5	,681	,619	,341	,304	,338	,299	,449	,496	,522	,209	,314	1,000	
X1.4	,665	,447	,232	-,023	,229	,203	,325	,359	,378	,204	,307	,453	1,000
X1.3	,768	,517	,267	,137	,265	,234	,375	,414	,436	,236	,354	,403	,511	1,000
X1.2	,544	,366	,189	,097	,187	,166	,265	,293	,309	,167	,251	,370	,362	,418	1,000
X1.1	,373	,251	,130	,067	,129	,114	,182	,201	,212	,302	,124	,254	,248	,606	,203	1,000

Implied Covariances (Group number 1 - Default model)

	Y2.3	Y2.2	Y2.1	Y1.1	Y1.2	Y1.3	X1.7	X1.6	X1.5	X1.4	X1.3	X1.2	X1.1
Y2.3	,840												
Y2.2	,423	,822											
Y2.1	,360	,687	,761										
Y1.1	,175	,334	,337	,758									
Y1.2	,208	,421	,338	,474	,876								
Y1.3	,226	,431	,367	,515	,612	,932							
X1.7	,045	-,069	-,123	,084	,014	,109	,417						
X1.6	,124	,236	,201	,157	,186	,202	,073	,639					
X1.5	,194	,213	,182	,272	,323	,351	,094	,175	,485				
X1.4	-,016	,158	,135	,215	,256	,277	,100	,187	,240	,579			
X1.3	,081	,154	,131	,209	,248	,270	,098	,181	,180	,249	,410		
X1.2	,065	,124	,106	,169	,201	,218	,079	,147	,189	,201	,196	,536	
X1.1	,047	,090	,076	,122	,145	,157	,150	,076	,136	,145	,298	,114	,591

Implied Correlations (Group number 1 - Default model)

	Y2.3	Y2.2	Y2.1	Y1.1	Y1.2	Y1.3	X1.7	X1.6	X1.5	X1.4	X1.3	X1.2	X1.1
Y2.3	1,000												
Y2.2	,509	1,000											

Y2.1	,450	,868	1,000										
Y1.1	,219	,423	,444	1,000									
Y1.2	,243	,496	,414	,582	1,000								
Y1.3	,255	,492	,436	,612	,677	1,000							
X1.7	,077	-,118	-,218	,150	,024	,174	1,000						
X1.6	,169	,326	,289	,225	,249	,262	,142	1,000					
X1.5	,304	,338	,299	,449	,496	,522	,209	,314	1,000				
X1.4	-,023	,229	,203	,325	,359	,378	,204	,307	,453	1,000			
X1.3	,137	,265	,234	,375	,414	,436	,236	,354	,403	,511	1,000		
X1.2	,097	,187	,166	,265	,293	,309	,167	,251	,370	,362	,418	1,000	
X1.1	,067	,129	,114	,182	,201	,212	,302	,124	,254	,248	,606	,203	1,000

Residual Covariances (Group number 1 - Default model)

	Y2.3	Y2.2	Y2.1	Y1.1	Y1.2	Y1.3	X1.7	X1.6	X1.5	X1.4	X1.3	X1.2	X1.1
Y2.3	-,010												
Y2.2	-,016	,000											
Y2.1	-,018	,009	,015										
Y1.1	,107	,048	,056	,009									
Y1.2	-,066	-,043	-,023	-,010	-,014								
Y1.3	,080	,001	,019	,002	,002	,000							
X1.7	,045	,016	,009	,025	,030	,023	,001						
X1.6	-,010	,038	,025	,043	,038	,052	-,029	,001					
X1.5	,026	,007	,018	,003	,012	-,011	,021	-,015	,005				
X1.4	,049	,053	,083	,013	,021	-,021	-,025	,055	,015	-,006			
X1.3	-,007	-,013	,007	,024	,003	,006	-,017	-,019	-,005	-,011	,003		
X1.2	,012	-,096	-,079	-,010	-,065	-,079	,013	,001	-,009	-,042	,034	,000	
X1.1	-,066	-,017	-,038	,064	,057	-,010	-,007	-,038	-,011	-,001	,001	,024	-,002

Standardized Residual Covariances (Group number 1 - Default model)

	Y2.3	Y2.2	Y2.1	Y1.1	Y1.2	Y1.3	X1.7	X1.6	X1.5	X1.4	X1.3	X1.2	X1.1
Y2.3	-,082												
Y2.2	-,175	,004											
Y2.1	-,209	,086	,143										
Y1.1	1,300	,556	,668	,085									
Y1.2	-,741	-,450	-,263	-,104	-,115								
Y1.3	,876	,014	,202	,020	,014	,000							
X1.7	,754	,265	,159	,442	,501	,357	,017						
X1.6	-,133	,491	,339	,604	,488	,647	-,555	,009					
X1.5	,385	,100	,289	,042	,158	-,146	,454	-,254	,076				
X1.4	,704	,745	1,221	,192	,278	-,269	-,489	,867	,256	-,069			
X1.3	-,125	-,209	,119	,407	,050	,095	-,394	-,355	-,101	-,198	,047		
X1.2	,171	-1,409	-1,210	-,153	-,908	-1,068	,268	,021	-,160	-,705	,658	,000	
X1.1	-,934	-,240	-,564	,942	,777	-,126	-,125	-,612	-,202	-,023	,011	,422	-,023

Factor Score Weights (Group number 1 - Default model)

	Y2.3	Y2.2	Y2.1	Y1.1	Y1.2	Y1.3	X1.7	X1.6	X1.5	X1.4	X1.3	X1.2	X1.1
X1	-,011	-,009	,017	,003	,021	,010	,046	,031	,120	,068	,216	,048	-,048
Y1	-,029	,114	,040	,166	,263	,296	,138	-,029	,135	,005	,126	,010	-,061

Y2	,011	,789	,049	,008	-,043	,026	-,009	,005	,006	,005	,004	,001	,001

Total Effects (Group number 1 - Default model)

	X1	Y1	Y2
Y1	1,909	,000	,000
Y2	,927	,608	,000
Y2.3	,571	,374	,616
Y2.2	1,089	,714	1,174
Y2.1	,927	,608	1,000
Y1.1	1,480	,775	,000
Y1.2	1,759	,921	,000
Y1.3	1,909	1,000	,000
X1.7	,690	,000	,000
X1.6	1,284	,000	,000
X1.5	1,652	,000	,000
X1.4	1,762	,000	,000
X1.3	1,714	,000	,000
X1.2	1,386	,000	,000
X1.1	1,000	,000	,000

Standardized Total Effects (Group number 1 - Default model)

	X1	Y1	Y2
Y1	,673	,000	,000
Y2	,348	,648	,000
Y2.3	,179	,333	,514
Y2.2	,345	,642	,990
Y2.1	,305	,568	,877
Y1.1	,488	,726	,000
Y1.2	,539	,802	,000
Y1.3	,568	,844	,000
X1.7	,307	,000	,000
X1.6	,461	,000	,000
X1.5	,681	,000	,000
X1.4	,665	,000	,000
X1.3	,768	,000	,000
X1.2	,544	,000	,000
X1.1	,373	,000	,000

Direct Effects (Group number 1 - Default model)

	X1	Y1	Y2
Y1	1,909	,000	,000
Y2	-,233	,608	,000
Y2.3	,000	,000	,616
Y2.2	,000	,000	1,174
Y2.1	,000	,000	1,000
Y1.1	,000	,775	,000
Y1.2	,000	,921	,000
Y1.3	,000	1,000	,000

X1.7	,690	,000	,000
X1.6	1,284	,000	,000
X1.5	1,652	,000	,000
X1.4	1,762	,000	,000
X1.3	1,714	,000	,000
X1.2	1,386	,000	,000
X1.1	1,000	,000	,000

Standardized Direct Effects (Group number 1 - Default model)

	X1	Y1	Y2
Y1	,673	,000	,000
Y2	-,088	,648	,000
Y2.3	,000	,000	,514
Y2.2	,000	,000	,990
Y2.1	,000	,000	,877
Y1.1	,000	,726	,000
Y1.2	,000	,802	,000
Y1.3	,000	,844	,000
X1.7	,307	,000	,000
X1.6	,461	,000	,000
X1.5	,681	,000	,000
X1.4	,665	,000	,000
X1.3	,768	,000	,000
X1.2	,544	,000	,000
X1.1	,373	,000	,000

Indirect Effects (Group number 1 - Default model)

	X1	Y1	Y2
Y1	,000	,000	,000
Y2	1,160	,000	,000
Y2.3	,571	,374	,000
Y2.2	1,089	,714	,000
Y2.1	,927	,608	,000
Y1.1	1,480	,000	,000
Y1.2	1,759	,000	,000
Y1.3	1,909	,000	,000
X1.7	,000	,000	,000
X1.6	,000	,000	,000
X1.5	,000	,000	,000
X1.4	,000	,000	,000
X1.3	,000	,000	,000
X1.2	,000	,000	,000
X1.1	,000	,000	,000

Standardized Indirect Effects (Group number 1 - Default model)

	X1	Y1	Y2
Y1	,000	,000	,000
Y2	,436	,000	,000

Y2.3	,179	,333	,000
Y2.2	,345	,642	,000
Y2.1	,305	,568	,000
Y1.1	,488	,000	,000
Y1.2	,539	,000	,000
Y1.3	,568	,000	,000
X1.7	,000	,000	,000
X1.6	,000	,000	,000
X1.5	,000	,000	,000
X1.4	,000	,000	,000
X1.3	,000	,000	,000
X1.2	,000	,000	,000
X1.1	,000	,000	,000

Modification Indices (Group number 1 - Default model)

Covariances: (Group number 1 - Default model)

	M.I.	Par Change

Variances: (Group number 1 - Default model)

	M.I.	Par Change

Regression Weights: (Group number 1 - Default model)

	M.I.	Par Change
Y1.2 <--- Y2.3	4,236	-,139

Minimization History (Default model)

Iteration		Negative eigenvalues	Condition #	Smallest eigenvalue	Diameter	F	NTries	Ratio
0	e	8		-,773	9999,000	628,731	0	9999,000
1	e	7		-,371	2,262	309,843	21	,477
2	e	3		-,321	,646	191,672	6	,960
3	e	1		-,045	,411	128,488	4	,861
4	e	0	8531,192		,479	84,333	5	,796
5	e	0	418,605		,988	81,549	6	,000
6	e	0	384,657		,809	50,532	2	,000
7	e	0	926,772		,647	41,118	1	,987
8	e	0	828,350		,558	40,094	1	,782
9	e	0	2396,685		,226	39,458	1	1,069

10	e	0	2986,365	,199	39,413	1	1,088
11	e	0	3627,950	,045	39,409	1	1,043
12	e	0	3656,465	,006	39,409	1	1,005
13	e	0	3638,012	,000	39,409	1	1,000

Pairwise Parameter Comparisons (Default model)

Variance-covariance Matrix of Estimates (Default model)

	par_1	par_2	par_3	par_4	par_5	par_6	par_7	par_8	p
par_1	,2								
par_2	5								
par_3	,1,2								
par_4	7 0								
par_5	4 3								
par_6	,2,2,3								
par_7	1 1 3								
par_8	5 9 5								
p	,2,2,2,3								
par_9	0 0 7 1								
par_10	4 7 1 4								
par_11	,1,1,2,2,2								
par_12	6 7 2 0 5								
par_13	8 0 5 5 0								
par_14	,0,0,0,0,0,0								
par_15	6 6 9 8 6 7								
par_16	7 4 1 6 9 8								
par_17	- - - - - - ,0								
par_18	0 0 0 0 0 0 1								
par_19	1 1 1 2 1 4 1								
par_20	- - - - - ,0,0,0								
par_21	0 0 0 0 0 0 0 1								
par_22	1 1 1 1 1 0 4 0								
p	,0,0,0,0,0,0,0 -,0								

ar 0 0 0 0 0 0 0,0 0
_ 0 0 1 0 0 3 1 0 9
9 2
p
ar,0,0 -,0,0,0,0,0,0,0,0
_ 0 0,0 0 0 0 0 0 0 1
1 1 1 1 0 2 0 0 2 1
0
p
ar,2,2,3,3,2,0 - -,0,0,4
_ 2 3 0 1 4 9,0,0 0 0 2
1 8 7 7 1 0 6 1 0 0 0 3
1 8
p
ar - - - - - - - -
,0,0,0,0,0,0,0,0,0,0,1
_ 2 1 2 1 0 2 0 0 0 3 6
1 3 8 3 8 6 2 0 3 0 0 9 1
2
p
ar - - - - - - - - - -
,0,0,0,0,0,0,0,0,0,0,0
_ 0 0 0 0 0 0 0 0,0 0 0 4 2
1 2 4 4 5 2 3 3 5 5 1 6 3 3
3
p
ar,0,0,0,0,0,0,0,0,0,0,0,0,0,0
_ 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1 0 0 0 0 0 0 0 0 1 0 0 0 0 1
4
p
ar,0,0,0,0,0,0,0,0,0,0,0 -,0,0
_ 0 0 0 0 0 0 0 0 0 0 0 0,0 0 0
1 0 0 0 1 0 0 0 0 0 0 1 1 0 1
5 1
p
ar,0,0 -,0,0,0,0,0,0,0,0,0 -,0,0,0
_ 0 0,0 0 0 0 0 0 0 0 0 0,0 0 0 0
1 0 0 0 0 0 1 0 0 1 1 0 0 0 0 0 2
6 1
p
ar,0,0 -,0 -,0,0,0,0,0 -,0,0,0,0,0,0
_ 0 0,0 0,0 0 0 0 0 0,0 0 0 0 0 0 0
1 0 0 0 1 0 1 0 0 0 0 0 0 1 0 0 0 0 0 2
7
p ,0,0,0,0,0 -,0,0 -,0,0,0,0,0,0,0,0,0
ar 0 0 0 0 0,0 0 0,0 0 0 0 0 0 0 0 0 0
_ 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1

1 1 1
8
p
ar ,0,0 ,0 ,0,0,0,0,0 , ,0,0,0,0,0,0,0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 2
9
p
ar ,0 , , , ,0 ,0,0,0,0 ,0,0,0,0,0,0,0,0,0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 3
0
p
ar , , , , , ,0,0,0,0,0 ,0,0,0,0,0,0,0,0,0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1 1 2 2 1 0 0 0 0 0 0 0 0 0 0 2
1
p
ar ,0,0,0,0,0,0,0,0,0 ,0,0,0,0,0,0,0,0,0,0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1 0 0 0 0 0 0 0 0 0 1 0 0 0 0 2
2
p
ar ,0 ,0 ,0 ,0,0,0,0,0,0 , ,0,0,0,0,0,0,0,0,0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 2 0 3 1 0 0 0 0 0 0 0 0 0 0 1
3
p
ar ,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
4 5 5 6 5 2 0 0 0 0 5 0 0 0 0 0 0 0 0 0 0 0 0 2
4
p
ar ,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
0 0 1 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
7 6 0 9 8 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 2
5
p
ar ,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
2 3 2 3 2 1 0 0 0 0 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
6
p
ar ,0,0 ,0,0,0,0,0,0,0,0,0 ,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 1 0 0 0 0 0 0 0 0 2 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1

ar 1 0
5 0
2 0
p
ar ,7,8 1,
8 4 0
3 4 0 0
p
ar ,7,8,8 1,
6 1 3 0
4 9 9 6 0
p
ar ,7,7,7,7 1,
0 5 7 3 0
5 8 5 9 0 0
p
ar ,5,5,5,5,4 1,
0 0 6 4 9 0
6 4 9 2 9 6 0
p - - - - - -1,
ar ,0,0,0,0,0,1 0
1 2 1 3 1 4 0
7 7 9 6 3 2 1 0
p - - - - - - 1,
ar ,0,0,0,0,0,0, 3 0
1 2 1 2 1 1 8 0
8 4 5 5 0 0 1 1 0
p - - - - - -1,
ar ,0,0, 0 ,0, 0,1,0 ,1 0
0 0 1 0 0 1 8, 5 0
9 3 5 1 4 2 4 2 8 0
p
ar ,0,0 -,0,0,0,0 -,2 1,
1 1, 0 2 0 7 0, 0 4 2 0
1 2 1 2 0 6 6 5 6 4 0
0
p
ar ,7,8,8,8,7,5 - -,0,0 1,
3 0 1 5 3 3, 1,1 0 0 0
1 9 8 6 4 7 0 6 2 6 0 0
1 6 8
p
ar - - - - - - - - - -1,
,1,1,0,0,0,1,0,0,0, 0 ,1 0
1 2 0 9 8 3 9 0 7 1 0 4 0
2 0 1 8 2 0 7 3 1 1 6 9 0

p
ar ------ ----1,
,0,0,0,0,0,0,1,3 3,0,0,6 0
_ 2 5 4 6 2 8 9 0 0 7 6 9 0
l 9 8 8 4 5 1 3 5 9 4 6 8 0
3

p
ar ----- --- - -1,
,0,0,0,0,0,0 0,0,1,2,0 -,0 -,0 0
_ 0 0 0 1 0 0 0 3 4 3 1 1 9 0
l 6 9 4 0 5 0 4 8 0 3 1 2 6 0
4

p
ar ,0,0,0,0,0,0,0 --- ,0,0,0 - -1,
1 2 2 3 1 2 ,0,0,0 6 5 9 ,1,2 0
_ 6 7 0 3 7 8 9 4 8 4 3 3 2 0 0
l 8 6 0 3 9 0
5

p
ar ,0 ----- --- -1,
0,0,0,0,0,0 7,0,0 3,2 ,0,0,1,1 1 0
_ 0 0 2 0 1 4 5 2 3 0 1 5 0,1 2 0
l 8 1 8 4 3 7 3 0 7 6 3 7 2 2 0
6

p
ar ,0,0,0,0,0,0,0,0,0,0,0 - ,0 - - ,0,0 1,
2 1 3 1 2 4 0 0 5 0,0,0 2,0,0,0 3 6 0
_ 2 7 5 8 4 1 7 9 2 3 2 4 1 1 2 5 0
l 9 1 3 6 0
7

p
ar ,0,0 - ,0,0 - - ,0 - - ,0,0,0 - ,1 - ,0 1,
0 0,0,0 0 0,0,0,0 4,2,0 0 2 7,0 7,1 2 0
_ 8 7 0 7 7 6 2 4 9 1 5 7 5 4 1 4 0 9 0 0
l 5 8 9 5 0
8

p
ar ,0,0 ---- ,0,0 ----- ,0 --- ,0,0,0 1,
0 0,0,0,0,0,0 0 1,0,0,0,0,0 1,0,0,0 8 1 1 0
_ 7 7 2 1 3 1 7 0 4 0 2 6 7 1 0 4 6 0 0
l 4 6 3 7 9 8 5 3 7 2
9

p
ar ,0 ---------- - - - ,0,0,0,0,0,0 1,
2,0,0,1,0,0,0,0,0 9,1 1,0 0,0 0 2 1 5 0
_ 9 2 2 9 0 6 2 6 2 9 7 0 2 8 3 0 6 1 3 1 0
l 4 4 8 6 8 1 8 6 6 7
0

p
ar ------ ,0,0,0 -- ,0,0,0 ----- ,0 1,
,0,0,0,0,0,0 4 0 2 ,0,0 0 0 0 ,0,0,0,0,0 2 0
_ 5 5 6 8 2 0 7 2 9 3 5 2 9 8 4 0 0 1 1 3 0
l 3 2 2 6 4 4 2 0 8 4 5 9 9 0
1

p ---,0 -,0,0 -,0 --,0 -,0 -,0,0 ---,11,

ar ,0,0,0 1,0 1 1,0 4,1 ,0 4,0 1,0 0 7,0,0,0 4 0
_ 3 1 0 7 0 8 6 0 6 0 1 6 4 0 0 5 2 1 1 5 4 0
2 5 7 1 8 8 3 3 7 7 3 5 6 0
2
p
ar - - ,0 - ,0 - ,0,0,0,0 - - ,0,0 - - - ,0 - ,2,0 -1,
,0,1, 1 ,2, ,0, 4 3 0 0 ,0,0, 8 0 ,0,0,0, 0 ,0, 7 7 ,0 0
_ 3 4 8 0 6 3 5 2 5 2 3 6 7 5 2 1 1 3 3 7 9 6 0
2 7 1 5 0 3 4 6 7 0 7 0 9 0
3
p
ar ,1,2,1,2,2,1 - - - - ,1 - - - ,0 - - ,0,0 - - - - -1,
_ 8 5 8 1 1 5 ,0,0,0,0, 7 ,0,0,0, 2 ,0,0, 2 9 ,0,0,0,1 0
2 8 8 0 4 1 5 2 1 3 0 8 0 1 1 9 2 1 0 4 2 3 0 7 0
4 4 2 7 1 6 9 7 7 1 8 1 6 3 0
p
ar ,3,3,3,3,3,3 - - ,0,0,3,0 - - ,0 - - ,0 - - - - ,0,2 1,
_ 0 0 7 5 4 2 ,0,0, 1 0 5 0 ,0,0, 3 ,0,0, 0 ,0,0,0,0, 5 5 0
2 2 8 3 8 6 1 2 1 1 7 1 2 5 1 0 1 5 6 3 6 2 0 8 4 0
5 6 9 5 2 8 7 4 5 7 3 0
p
ar ,1,1,1,1,0,1 - - ,0,0,1,0 - - ,0,0,0,1,0 - - ,0 - ,2,1 1,
_ 1 6 0 3 9 4 ,0,0, 0 1 1 1 ,0,0, 2 1 3 3 1 ,0,0, 1 ,0, 4 7 0
2 4 1 7 3 8 3 2 2 0 7 3 8 5 4 8 3 9 0 2 0 4 3 7 2 9 0
6 4 8 2 2 8 1 5 0
p
ar - - - - - - - - ,0,0 - ,0 - ,0 - ,2,1 - ,0 - - ,0 - - - -1,
,0,0,0,0,0,0,1,0, 5 3 ,0, 9 ,1, 7 ,0, 9 4 ,1, 0 ,0,0, 0 ,0,0,0,1 0
_ 1 1 2 1 2 2 1 1 0 1 1 9 5 1 1 2 7 0 3 1 2 6 1 1 5 2 0
2 4 6 3 9 0 8 1 7 6 1 7 1 6 0 9 9 9 1 6 0
7
p
ar - - - - - - ,0,0 - - - ,1,0,0 - ,0,0 - ,0,0,0,0,0 - - - ,0 1,
,8,9,8,8,8,5, 2 1 ,0,0,8, 1 4 0 ,0, 1 2 ,0, 1 4 4 1 5 ,2,3,1, 2 0
_ 3 0 9 8 0 8 3 8 0 0 5 2 8 8 2 0 5 0 1 7 9 0 1 1 6 3 1 0
2 8 9 7 7 4 1 1 7 9 4 5 1 7 1 0
8
p
ar ,0,0,0 - - ,0 - - - ,0 - ,1 - ,3 ,0,0,0,0,0,0,5 - ,0 - ,0 - ,0,0 -1,
_ 5 5 0 ,0,0, 2 ,3,3,0, 2 ,0, 9 , 4 2 3 2 0 0 1 0 ,0, 0 ,0, 4 ,0, 3 4 ,0 0
2 7 9 6 1 1 0 8 6 1 5 3 8 4 9 2 3 7 9 8 2 2 0 6 8 2 4 7 1 0
9 8 0 0 3 3 7 4 1 7 1 5 0
p
ar ,0,0,0,0,0 - - ,0 - - ,0,1 - - ,1 - ,0,0,2,0 - - - ,0,0,0,0 - ,0 1,
_ 0 1 0 1 0 ,0,0, 3 ,4,1, 0 5 ,0,1, 6 ,4, 0 7 5 0 ,0,0,0, 2 0 0 1 ,0, 4 0
3 5 4 7 3 1 5 2 2 4 6 6 7 6 0 3 4 2 3 4 3 1 0 2 5 2 7 4 0 5 0
0 5 5 9 6 0 8 5 6 2 2 8 0
p ,1,1,1,2,1,1 - -,0,0,1,0 - -,0 - -,0 - - -,0 -,1,6,3 - -,0,01,
ar 6 9 8 0 6 8,0,0 0 0 8 1,0,0 2,0,0 0,0,0,0 0,0 5 9 7,0,1 1 0 0

_ 5 5 5 3 4 5 2 1 4 9 1 3 4 0 0 0 3 8 1 4 3 4 5 6 3 3 3 9 1 3 0
3 0 4 6 9 8 4 1 7 0 5 5 7 0
1
p
ar ,0,0,0,0,0,0 ,0,0,0 ,0,0,0 ,0,0,0 ,0,0,0,0,1,0,0 ,0,0,0 ,0,0,0,0,0 1,
_ 7 0 4 5 3 3 0 0 0 6 3 2 0 1 1 0 0 3 3 1 4 1 0 5 0 0 2 7 0 2 0
3 3 7 4 5 0 6 7 3 8 1 4 4 6 2 0 7 1 6 1 1 5 7 6 3 3 7 9 8 9 4 4 0
2 0
p
ar ,1,0,2,2,2,2,0,0,0 ,0,2 ,0,0 ,0,0 ,0,0,0,0,0,0,0,1 ,0,6 ,0,0,2,1,0,2,0 1,
_ 4 3 7 1 6 2 0 1 1 0 4 2 0 0 0 1 4 0 6 7 0 1 8 2 6 2 3 1 2 1 7 7 0
3 8 3 6 7 4 0 7 0 9 9 6 3 9 2 5 4 8 7 5 5 7 0 3 0 6 5 3 2 8 4 6 9 0
3 0
p
ar ,0,0 ,1,0 ,0,0,0,0,0,0 ,0,0,0 ,0,0,0,0,0,0 ,0,0,3,1,0 ,0,0,0,0,0 ,0 ,0,2 -1,
_ 2 5 1 1 6 1 2 0 0 2 1 3 0 0 2 1 1 4 6 1 3 9 5 7 4 1 1 2 0 0 5 1 0
3 0 2 8 5 6 4 2 8 7 0 5 2 6 2 5 9 3 5 1 9 6 6 7 8 1 9 0 3 1 2 8 8 8 0
4
p
ar ,0,0,0,2,0 ,0,0,0 ,0 ,1,0,0,0 ,0,0,0,0,5,2 ,0,2 ,0,0,0,0,0,1 ,0,0,0,0,0,0 -1,
_ 2 6 5 7 0 8 3 1 0 4 3 4 5 0 2 0 1 0 1 9 7 4 8 7 6 4 0 8 3 1 7 8 1 9 0
3 8 9 0 5 0 3 9 4 6 2 3 5 7 2 8 5 0 3 4 8 3 4 5 4 9 6 3 1 3 2 3 2 6 6 0
5
p
ar ,0,0,0,0,1,0,0,0,0 ,0,0,0 ,0,0,0 ,0,0,0 ,3 ,0,0,0 ,1,1,0,0,0,0,0,0 ,0,0,1 ,0 -1,
_ 2 0 6 0 3 2 0 0 0 0 4 0 2 0 0 1 0 0 1 4 2 0 4 2 7 0 0 3 3 4 0 1 3 7 ,0 0
3 8 4 0 4 0 1 9 7 0 2 4 3 1 1 3 2 6 6 6 4 1 0 2 3 0 7 4 7 1 7 3 0 2 7 9 0
6 0 0
p
ar ,0,0,0,0,0 ,0,0,0 ,0,0 ,0,0 ,0,0,3 ,1 ,2,0 ,0,0,0,0,0 ,0,2 ,2,0,0 ,0,0 ,0,0,0 -1,
_ 0 1 1 0 1 6 3 0 3 0 0 3 5 2 0 0 0 1 5 9 2 0 1 ,0 0
3 8 9 3 1 2 1 5 4 8 2 0 4 3 0 8 5 0 0 1 0 4 7 1 1 9 0 0 6 7 0 2 6 0 0
7 1 7 1 4 8 3 8 4 1 4 5 9 3 6 3 7 0
p
ar ,0,0,0,0,0,0,3,2,0 ,0,0,1,2 ,0,1,0 ,0 ,0,0,0,0,0 ,0,0,0,0,2,0,0,0 ,0 ,0 ,0 1,
_ 2 4 2 4 1 4 1 6 0 1 7 5 6 3 5 4 1 1 2 1 4 1 6 3 3 3 8 3 8 6 2 0 2 2 3 1 2 0
3 6 5 5 2 8 9 2 5 6 8 6 3 4 4 4 8 1 8 0 2 9 3 3 3 1 6 7 2 5 5 4 6 1 1 9 3 7 0
8
p
ar ,0,0,0,0,0,0 ,2,0 ,0,0 ,0,0 ,0,2 ,0,0,0 ,0,0,0,0,0,0,0 ,1,0,0 ,0,0 ,0,0 ,0,0,0 -1,
_ 1 2 0 1 0 4 7 0 6 1 4 7 6 9 0 6 0 3 6 2 3 1 1 0 9 1 1 2 1 0 1 2 2 0 0 1 0
3 4 1 8 9 7 4 3 4 8 2 7 1 4 2 3 7 8 2 0 0 3 8 1 7 2 8 4 4 4 2 2 0 2 3 0 4 6 9 3 0
9 9 0
p ,0,0,0,0,0,0,0,0 -,0,0,0,0 -,3 -,0,0 -,0,0,0,0 -,0,0,0 - -,0 -,0,0 -,0 -,0,0 - -1,
ar 0 1 0 1 0 0 1,2 6 0 1 2,0 5,0 0 1,0 0 3 2 1,0 0 1 3,0 0 4,0 1 0,0 0 0,0 0 1,0,0 0
_ 9 5 9 2 6 1 2 2 5 9 5 1 6 2 3 2 5 1 4 3 3 3 1 9 3 2 2 1 3 0 0 1 0 4 0 4 2 8 8 0

4 4 4 5 5 8 9 1 3 5 1 3 9 0
0
p
ar ,0,0,0 ,0,0,0,0 ,0,6,0 ,0,0,1,3 ,1,1,0 ,5,0 ,0,0,0,0 ,0,0,0,0,0 ,0,1,0,0,0 ,0,0,0,0,0 ,0 1,
_ 0 1 0 1 0 6 5 9 0 3 0 4 6 4 5 1 4 2 0 2 4 0 3 0 1 4 0 1 2 0 0 1 0 0 0 7 2 6 7 0
4 7 0 6 4 4 4 3 3 5 1 6 6 7 8 3 4 6 9 7 1 5 9 5 9 9 3 9 1 6 2 6 5 3 0 8 2 2 7 3 2 9 0
1
p
ar ,0,0 ,0,0,0 ,0,0,0 ,7,0 ,0,0,1 ,2,2 ,1,0,4 ,0,0 ,0,0,0,0,0,0 ,0,0,0,1,0 ,0,0,0 ,0,0,0,0,0 ,0,7 -1,
_ 0 1 0 1 0 7 8 9 2 1 1 6 8 4 4 2 6 1 1 3 5 1 4 0 1 3 0 2 4 0 0 1 1 0 0 5 4 9 5 9 0
4 8 3 6 9 6 6 0 5 1 7 1 9 0 1 6 5 1 1 2 7 9 5 4 9 4 6 2 8 3 0 7 3 3 0 5 2 0 9 0 5 3 0
2
p
ar ,0,0,0,0,0,0,0 ,0,0,0 ,0,0,0,0 ,0,0,2 ,0,0,2 ,2,0 ,0,0,0,0,0 ,0,0,0,0,0 ,0,0 ,0,0 ,0,0 -1,
_ 0 0 1 2 0 0 1 0 7 1 1 2 0 3 9 1 1 5 0 2 5 8 2 0 1 1 1 1 0 2 1 1 1 6 5 0 3 2 2 0 8 1 0
4 4 9 7 1 7 1 5 5 0 3 3 4 3 9 4 4 7 3 2 4 5 3 7 8 4 7 0 0 5 7 0 0 1 4 8 1 5 0 0 8 2 0 0
3 8 0

Critical Ratios for Differences between Parameters (Default model)

p p p p p p p p p p p p p p p p p p p p p p p p p p p p p p p p p p p p p p p p p p p
ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar ar

_1 _2 _3 _4 _5 _6 _7 _8 _9 _10 _11 _12 _13 _14 _15 _16 _17 _18 _19 _20 _21 _22 _23 _24 _25 _26 _27 _28 _29 _30 _31 _32 _33 _34 _35 _36 _37 _38 _39 _40 _41 _42 _43

p ,0
ar 0
_1 0

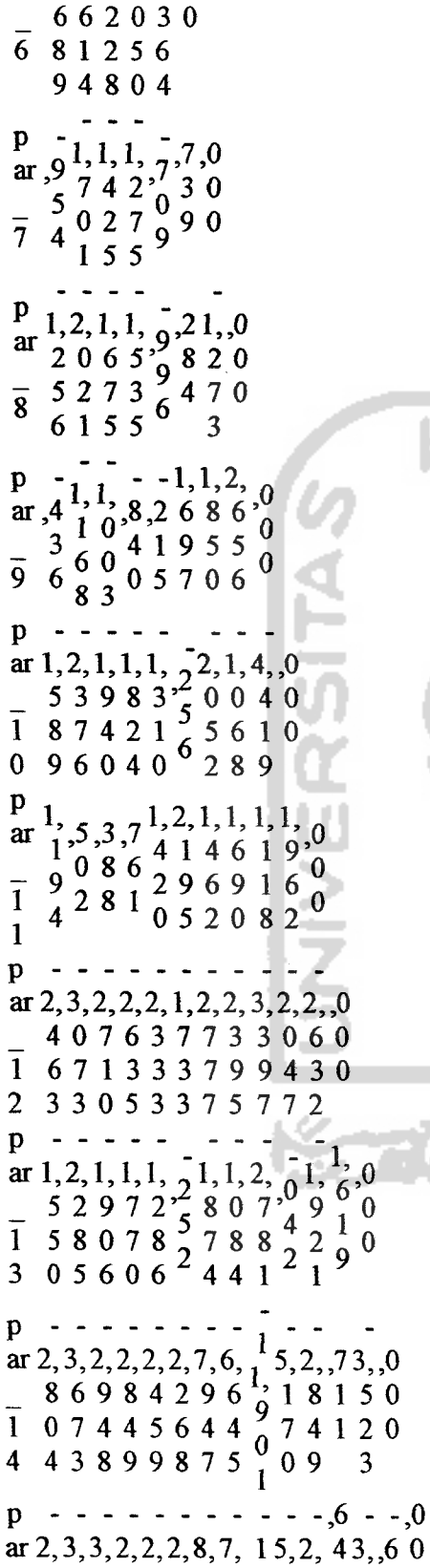
p 1, ,0
ar 1 0
_2 6 2 0

p 1, ,1,0
ar 0 5 0
_3 4 6 4 0

p ,7 ,1,3 ,0
ar 3 9 3 0
_4 8 1 7 0

p ,2 1,1, ,9 ,0
ar 7 2 3 3 0
_5 3 7 0 6 0
8 5

p - - - - -,0
ar 1,2,2,2,1, 0



_ 0 8 1 0 6 6 0 0 2, 1 0 5 3 6 9 4 6 1 8 7 8 7 0
2 2 8 3 1 8 4 8 2 2 3 1 5 7 4 3 6 4 5 0
3 4 0 5 1 2 1 9 5 3 7 0 3 7 1 5 0 2 8
7

p - - - - - - - - - - - - - - - - - - -
ar 3,3,3,3,2,2,8,7, 1 1, 5,3,,53,1, -1, 9 2 1,,62,1,1, 1, 0,4,0
_ 0 9 1 0 6 6 1 2 0 5 0 0 9 4, 8 6 7 2 0 6 7 0 0 0
2 2 5 3 4 7 0 8 0 1 7 1 3 8 6 6 5 4 2 8 7 3 9 9 0
4 7 3 0 6 1 7 2 7 6 0 1 7 9 1 5 5 8

p - - - - - - - - - - - - - - - - - -
ar 2,3,2,2,2,1,6,5,9,3,2,,92, 1,2,4,1,4, 8,9 1,3,4,3, 0
_ 6 5 8 7 3 9 6 5 5 9 7 6 8 9 4 2 1 1 0 1 1 7 0 2 0
2 5 4 4 4 2 8 1 5 4 9 5 5 0 0 8 4 7 2 5 2 8 9 9 9 0
5 7 6 8 0 0 7 0 7 4 2 5 0 9 5 1 1 9 0 1 4 6

p - - - - - - - - - - - - - - - - - -
ar 2,3,2,2,2,2,7,6, 1 0, 4,2,,83,,8 1,3, 4 6 ,2 3, 5,1 - ,0,1 2 8 3,3,2, 1 0 3 - 1,,0
_ 7 6 8 8 3 1 3 3 4 6 8 1 2 2 6 0 0 8 7 0 8 3 1 0
2 4 3 9 0 9 5 7 0 1 8 0 0 5 8 8 9 0 0 0 8 2 8 9 2 9 0
6 2 1 7 1 5 9 4 0 8 6 5 3 9

p -
ar 3,3,3,3,2,2,8,7, 1 2, 6,3,,34,2,2,,53, 4 4 3,2,2,,2 6,9 3,3,,0
_ 0 9 1 0 7 7 6 9 3 2 0 6 2 9 2 3 1, 0 6 8 1 8 0 9 1 0
2 8 7 7 9 2 4 8 4 0 9 5 9 7 6 6 6 4 0 9 7 8 5 1 9 6 3 0
7 9 1 9 0 9 0 9 5 1 3 8 4 3 2 8 2 6 6 9 9

p -
ar 2,3,2,2,2,1,7,6,9,4,2,,73,,5,9 2, 9 ,0 2, 5,2,1 - - ,0 2,2,1, - -2, 0
_ 5 2 6 5 2 9 2 1 9 5 6 9 3 0 8 2 1 1 0 9 2 0 5 4 4,9,1 6 0
2 1 7 8 9 2 5 5 8 7 3 2 1 2 7 1 5 1 8 9 0 1 6 2 7 3 5 6 0
8 8 8 7 1 0 0 0 9 5 2 9 7 6 1 0 4 6 4

p - - - - - - - - - - - - - - - -
ar 2,2,2,2,1,1,3,2,5,1,2, 1, 5 1 1, 3,3,4,2,4,2,3,2,4,4,3,1,2,4,2, 0
_ 1 9 3 2 8 1 3 5 8 7 3 1 4 1 4 5 6 2 4 2 6 2 1 7 9 6 4 5 0
2 3 6 8 5 0 1 3 3 9 8 3 8 4 1 0 4 8 6 4 6 5 7 0 4 2 5 0 6 0
9 6 4 5 9 5 2 0 1 7 4 8 4 2 2 3 2 9 4 9 1 0 5 0 5 3 4 7

p - - - - - - - - - - - - - - - -
ar 2,2,2,2,1,1,4,3,5,1,2, 1, 5 4 1, 3 2 3,4,4,3,5,3,3,3,5,5,4,2,3,5,3, 1,0
_ 0 9 3 2 7 0 1 2 4 7 3 9 7 9 5 7 6 1 4 4 5 7 5 4 6 3 3 0
3 9 2 7 5 9 6 8 3 7 1 3 4 9 8 0 1 9 1 9 8 0 1 5 8 9 5 1 3 0
0 0 9 7 1 6 2 2 2 0 2 0 8 3 0 1 1 4 1 1 0 4 3 9 3 2 8 6 9

p - - - - - - - - - - - - -1, -5,5,6,4,6,4,4,4,6,6,6,6,5,6,4,1,1,
ar 1,2,2,2,1,,63,2,5,,82, 8,5 4 8 9 7 9 4 3 7 6 7 3 2 7 7 2 1 2, 0
_ 8 7 2 0 5 5 1 0 3 2 1 1 7 8 9 7 5 6 4 4 6 1 5 9 3 4 8 3 7 1 0
3 7 2 0 8 7 9 3 8 8 2 8 7 1 6 3 4 8 5 3 9 5 7 4 8 3 9 2 5 8 4 0

1 54003 171 5

p - - - - - - - - - - - - 1, - 4,5,6,4,6,3,3,4,6,6,5,3,4,6,3, - -
ar 2,2,2,2,1,1,4,3,7,1,2, 5 1, 9 3 6 0 7 5 3 0 3 5 3 0 0 5 7 ,1 ,0 1,,0
_ 0 9 3 2 8 1 4 4 0 9 3 1 4 0 6 2 4 0 5 8 7 1 9 8 2 7 2 2 1 2 3 0
3 9 4 9 7 0 0 9 0 4 5 5 1 0 2 7 0 5 8 8 0 3 1 8 4 8 9 8 8 6 3 6 0
2 2 1 0 6 9 4 6 4 7 9 9 1 3

p - - - - - - - - - - - - 2,2,4,1,4,1,1,1,4,4,3, - 1,4,1, - - - -
ar 2,3,2,2,2,1,6,5,9,3,2,,9 2, 2 8 6 4 6 0 1 4 1 9 1 ,3 3 4 1 1,2,4,3,,0
_ 5 4 8 6 2 9 6 5 6 9 7 9 7 6 4 4 1 0 0 0 4 5 2 2 1 3 1 9 7 4 4 0 0
3 9 2 0 8 7 0 8 9 1 2 1 2 9 6 3 2 8 8 1 4 0 0 8 1 6 5 4 0 8 9 1 0 0
3 1 3 1 4 6 9 0 5 5 6 3 7 2 4 5 4

p - - - - - - - - - - - - 1, - 4,4,6,3,6,3,2,3,4,5,4,2,3,6,3, - - - -2,
ar 2,3,2,2,1,1,4,3,7,2,2, 3 1, 2 7 1 4 1 0 8 3 8 6 9 2 4 0 1,3,6 1, 6 0 ,0
_ 2 0 4 3 8 2 9 9 5 4 4 6 7 3 0 9 2 6 3 8 7 5 1 3 1 7 0 8 7 9, 4 0 0
3 3 8 4 6 9 8 7 0 7 6 2 4 6 5 4 9 5 2 8 7 5 7 9 4 0 7 6 4 1 1 4 9 6 0
4 1 1 7 4 8 6 2 9 6 5 6 2 3 8

p - - - - - - - - - - - - 1, - 3,3,5,2,5,2,3,2,4,5,3,1,2,5,2, - - - - 1, -
ar 2,3,2,2,2,1,5,4,8,3,2, 2 2, 2 7 2 5 2 1 4 9 7 7 8 3 4 1 4,9 1,2,1, 3,7 ,0
_ 3 1 5 4 0 4 6 5 1 0 4 0 1 9 1 9 5 0 5 5 5 1 7 3 8 4 0 5 9 2 5 3 1 6 0
3 5 7 7 0 3 8 5 1 7 3 9 8 9 5 1 5 2 3 9 7 6 5 2 7 5 4 7 7 5 9 2 9 0 0 0
5 1 4 1 9 7 7 7 2 1 3 8 3 5 7 3

p - - - - - - - - - - - - - 1, -5,5,7,4,6,5,4,4,6,6,5,3,4,6,4,1,1, -1,3,1,2,
ar 1,2,2,2,1, ,6 3,2,5, ,8 2, 8,6 4 8 0 8 9 2 3 7 5 5 6 7 8 8 6 1 1,0 2 6 9 4 ,0
_ 8 6 1 0 5 4 1 1 4 6 1 0 0 6 2 0 0 1 2 2 4 8 6 0 6 1 6 4 5 9 4 9 3 6 6 0
3 2 4 3 3 1 2 9 4 2 0 3 1 8 8 9 9 4 0 6 0 7 0 2 8 1 7 1 6 0 5 9 2 8 7 6 0
6 9 4 9 0 5 6 0 7 5

p - - - - - - - - - - - - 1, - 5,5,6,4,6,3,3,4,6,7,5,3,4,6,3, - - 3, 1, -
ar 2,2,2,2,1,1,4,3,7,1,2, 5 1, 2 7 0 6 6 8 8 3 5 2 7 1 9 1 9 ,1 ,0 1,,0 0 ,7 5 1,,0
_ 1 9 3 2 8 0 6 4 1 9 3 0 4 2 6 5 8 1 2 2 1 1 0 4 1 8 9 7 2 2 4 0 4 0 3 3 0
3 1 4 8 6 0 8 7 9 0 4 4 7 4 7 0 8 7 8 7 7 2 5 7 7 2 2 9 4 6 1 0 5 8 1 9 3 0
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p - - - - - - - - - - - - 1, - 3,3,4,2,4,2,2,2,4,4,3,1,2,4,2, - - - - 1, - - -
ar 2,3,2,2,2,1,6,4,7,2,2, 2 2, 1 4 9 5 9 1 2 5 7 9 8 4 4 7 3,7 1,2,1, 3,6 ,1 2,1,,0
_ 3 1 5 4 0 4 2 9 9 8 4 0 2 4 1 7 1 1 5 0 6 0 6 0 4 1 3 8 4 1 4 2 6 5 0 3 3 0
3 3 5 6 4 1 6 9 2 4 2 9 7 9 3 3 9 9 4 8 3 2 3 0 9 1 7 3 0 9 3 1 8 9 2 3 8 6 0
8 0 9 0 5 4 1 9 9 5 7 4 6 5 5 3 5 9

p - - - - - - - - - - - - 1, - 3,4,5,3,5,2,2,2,5,5,4,2,3,5,2, - - - -1, - - -
ar 2,3,2,2,1,1,4,3,7,2,2, 3 1, 6 7 5 0 6 6 6 9 1 3 4 0 0 0 8,4,6 1, ,7 9,1 ,6 1, ,7 ,4,0
_ 2 0 4 3 9 3 4 9 2 4 4 2 8 9 7 9 7 5 8 7 7 1 6 2 3 4 3 5 4 8 9 5 2 2 2 9 9 8 0
3 4 8 9 8 3 3 7 2 7 8 5 9 3 4 7 4 5 4 1 0 4 0 2 7 4 6 4 0 9 8 8 3 3 1 8 3 5 1 0
9 8 7 1 1 1 1 9 0 0 4 4 9 5 4

p - - - - - - - - - - - - 1, - 5,4,6,3,6,3,3,3,5,6,5,2,3,6,3, - - - -2, 1, - -1,
ar 2,2,2,2,1,1,4,3,7,2,2, 4 1, 2 8 2 7 2 3 3 7 8 1 0 6 7 0 4,0,2 1, ,2 5 ,4 2 1, ,2 0 ,5,0
_ 1 9 4 2 8 1 6 2 3 1 3 6 4 9 6 8 3 3 0 5 4 4 3 4 6 6 6 5 4 1 5 1 7 3 0 4 2 1 1 0
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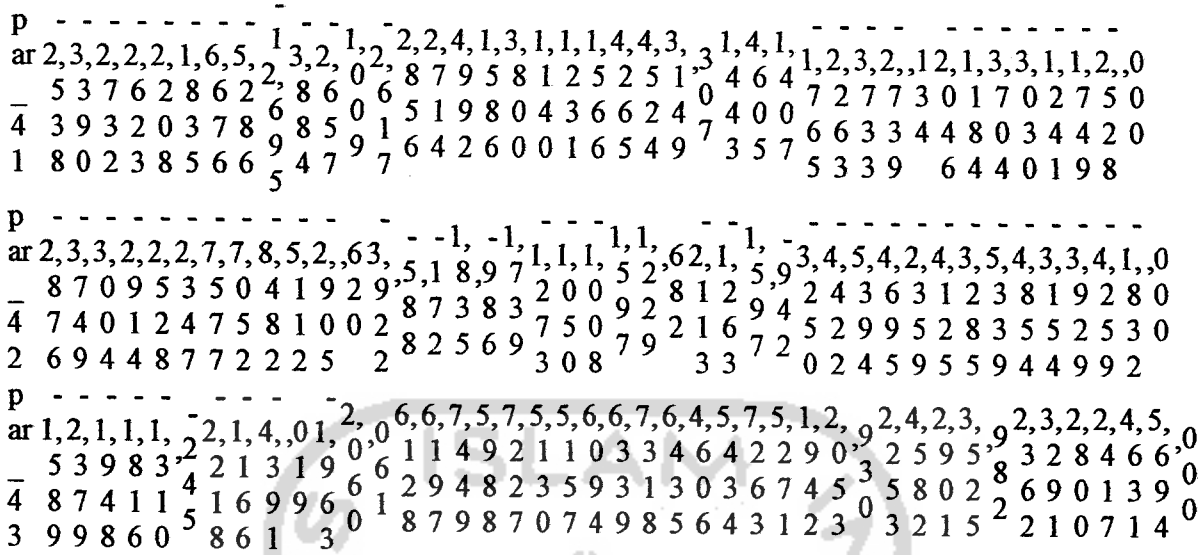

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	43	39,409	48	,807	,821
Saturated model	91	,000	0		
Independence model	13	621,568	78	,000	7,969

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	,035	,946	,899	,499
Saturated model	,000	1,000		
Independence model	,229	,404	,304	,346

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	,937	,897	1,015	1,026	1,000
Saturated model	1,000		1,000		1,000
Independence model	,000	,000	,000	,000	,000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	,615	,576	,615
Saturated model	,000	,000	,000
Independence model	1,000	,000	,000

NCP

Model	NCP	LO 90	HI 90
Default model	,000	,000	8,902
Saturated model	,000	,000	,000
Independence model	543,568	467,864	626,745

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	,398	,000	,000	,090
Saturated model	,000	,000	,000	,000
Independence model	6,278	5,491	4,726	6,331

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	,000	,000	,043	,970
Independence model	,265	,246	,285	,000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	125,409	139,574	237,431	280,431
Saturated model	182,000	211,976	419,070	510,070
Independence model	647,568	651,850	681,435	694,435

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	1,267	1,354	1,443	1,410
Saturated model	1,838	1,838	1,838	2,141
Independence model	6,541	5,776	7,381	6,584

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	164	186

Model	HOELTER .05	HOELTER .01
Independence model	16	18

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	43	39,409	48	,807	,821
Saturated model	91	,000	0		
Independence model	13	621,568	78	,000	7,969

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	,035	,946	,899	,499
Saturated model	,000	1,000		
Independence model	,229	,404	,304	,346

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	,937	,897	1,015	1,026	1,000
Saturated model	1,000		1,000		1,000
Independence model	,000	,000	,000	,000	,000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	,615	,576	,615
Saturated model	,000	,000	,000
Independence model	1,000	,000	,000

NCP

Model	NCP	LO 90	HI 90
Default model	,000	,000	8,902
Saturated model	,000	,000	,000
Independence model	543,568	467,864	626,745

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	,398	,000	,000	,090
Saturated model	,000	,000	,000	,000
Independence model	6,278	5,491	4,726	6,331

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	,000	,000	,043	,970
Independence model	,265	,246	,285	,000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	125,409	139,574	237,431	280,431
Saturated model	182,000	211,976	419,070	510,070
Independence model	647,568	651,850	681,435	694,435

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	1,267	1,354	1,443	1,410
Saturated model	1,838	1,838	1,838	2,141
Independence model	6,541	5,776	7,381	6,584

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	164	186
Independence model	16	18

Execution time summary

Minimization:	,047
Miscellaneous:	,375
Bootstrap:	,000
Total:	,422