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Insurance: A Consumer's Perspective

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Abstract

Life insurance is a pivotal part of the world in which we live, and yet most consumers think about it very little. Life insurance started with the Ancient Greeks and continued to develop in Europe, eventually reaching the United States. Throughout history, insurance companies have undergone a number of modifications to match changing consumer needs. In our modern society, insurance can be best defined as an intermediary that reduces the financial drain caused by the death of an individual by apportioning this loss among a very large group. Today, insurance companies sell a number of diversified products, but most insurance products can be divided into five major categories, term insurance, whole life insurance, variable insurance, universal insurance, and variable universal life insurance. Each category has its own characteristics, strengths, and weaknesses. As a consumer, it is important to gain a thorough understanding of each product before the decision to purchase one is made.

To decide if a stock owned (i.e. publicly traded company) is better than a mutual company (i.e. privately owned company), the consumer must look at his or her own needs first and then determine if one company fits better than another. As was found in this particular project, both a publicly traded company (The Hartford) and a mutual company (Northwestern Mutual) were found to have desirable products. While each individual can assess his or her own determinants of insurance consumption, it is helpful to look at factors that affect consumption on a larger scale. Black & Skipper (2000) found a number of factors that affect world consumption of insurance, while this paper attempted to take those factors and determine if they applied to a smaller subset of the group, the United States. It was found that age does not affect insurance consumption in the United States. More importantly, income is only important when educational attainment is not included. This possibly suggests that in the United States, educational

attainment is a more important predictor of insurance consumption than is income. Additionally, this statistical analysis weakly suggests that the factors that affect insurance consumption in the world may not necessarily affect insurance consumption in the United States.

Insurance

Insurance, a product everyone wants, but nobody wants to purchase. Consumers, especially young consumers, very rarely stop to really think and research the various insurance products out there, such as life insurance. Unless our relatives were closely tied to the insurance world, many of us went through childhood and early adulthood paying very little attention to the insurance products that our relatives owned or bought.

One day, almost everyone will be forced to think about insurance of some kind, be it because of the purchase of a new car, a new home, graduating from college, or exceeding the age limit on one's parents' health insurance. Discussing every kind of insurance and the various products that accompany it is far too wide of a scope for this paper. Thus, the focus of this paper will only be on life insurance products. Unlike the other mentioned insurance products, the benefits provided with life insurance can only be experienced in the distant future, a future that most never really think about. Typical college students have the "live forever" mentality and could not fathom the kind of effect their eventual deaths will have on the future generations of their yet to begin families. Obviously then, researching and purchasing an appropriate life insurance policy is one of the farthest things from their mind. Perhaps it should not be.

Consumers in the United States are proud of their decision-making abilities. They will spend hours comparing rates, prices, and features of just about any anything except their life insurance policy (Gale-Group, 2006). When so little time is spent thinking about life insurance, it is no wonder that most consumers know very little about the various options available to them. With no research completed and no comparisons made, consumers cannot possibly make an informed decision about their life insurance policy; a policy that will become a pivotal part of their future.

In order to become a more informed consumer, this paper was developed to explore life insurance and the various life insurance policies available, not from the perspective of a future actuary, but from the perspective of a future consumer. First, this paper will look at the history of life insurance: where it began, how it began, and when it became modernized into the insurance we know today. Next, life insurance, as a general topic, will be examined. After a look at the insurance in its most general sense, this paper will examine the basic life insurance products available, term life, whole life, universal life, variable life, and lastly a combination of the above will be explored.

After looking at these products in their generic form, specific products will be compared and contrasted. The products examined will be from Northwestern Mutual, one of the leading mutual life insurance companies in America today, and Hartford Life, a top tier publicly traded life insurance company. The purpose of this comparison is to investigate, as a consumer, whether a mutual company or a publicly traded company is better for consumers as a whole. After comparing and contrasting these two companies and the products that each sells, the opinions of the author will be discussed regarding which particular life insurance product she should or would purchase, given the direction that her life is going to follow. Lastly, various factors that have been considered by many to affect the number of life insurance products sold in the world will be discussed. As an appropriate accompaniment to the discussion of the factors that affect the number of life insurance products sold in the world, factors that could possibly affect the number of insurance products sold within the United States will be examined with the help of SAS, a statistical software package. As a soon to be college graduate, this paper, while fulfilling an Honor's requirement for graduation, is less about the requirement and more about the quest of

one consumer to become more informed, in order to someday soon be able to make an educated decision on one of the most important products ever to be purchased.

History

It is an important starting point to know how modern insurance developed. Life insurance has a history reaching back to the time of the Greeks. Personal life insurance is considered to have started with the Ancient Greeks when Greek citizens were given the guarantee they would have a proper burial when they died. While this is not insurance in the modern sense of the word, it was a beginning to what later become our modern life insurance company. In the Roman Republic, there evolved mutual benefit associations that were patterned after the Greek society's tradition of proper burial assurance. Unlike the Greek society though, these mutual benefit associations had stated benefits and regular membership contribution requirements (Black & Skipper, 2000; Carvajal, 2004).

Much later on in England, English Friendly Societies developed. These societies provided a death/burial fund benefit to their members. Even though many of these societies failed early on in their inceptions, they nevertheless pioneered the formation of private life insurance in England. Also, most of the early first life insurers in England and the rest of Europe only supplied short duration insurance. Providing benefits in the distant future was impossible for most insurers to guarantee and a risky investment for most policyholders given the high failure rates of these first life insurance suppliers (Black & Skipper, 2000; Carvajal, 2004).

The first true mutual insurance company founded was the Life Assurance and Annuity Association, established by the Mystery of the Mercers of London on October 4th, 1699. This company failed in 1745, a mere 46 years later. In 1752, the Amicable Society for a Perpetual Assurance Office as established. This company only allowed a limited number of policyholders

(2000) and provided a death benefit that relied upon the number of policy owners dying in the given year. The more policyholders that died in a given year, the smaller the death benefit provided. In 1765, The Society for Equitable Assurances on Lives and Survivorships was founded. This was the first insurance supplier to operate on modern insurance principles (Black & Skipper, 2000).

Unlike England, Friendly Societies never caught on in the United States. As a result, the first mutual life insurance company founded in the United Sates was not formed until 1759. This company was known as the Corporation for the Relief of the Poor and Distressed Presbyterian Ministers and for the Poor and Distressed Widows and Children of Presbyterian Ministers and was established in Philadelphia (Black & Skipper, 2000). This company is still in operation as the Presbyterian Ministers' Fund. New York Life Insurance and Trust Company became the first company in the United States to employ life insurance agents (Gale-Group, 2006). Insurance has evolved a great deal since its conception in the Greek era, though it preserves some of the features of yesterday. It is important to understand insurance not only as it was, but as it now is.

Overview of Modern Life Insurance

Thinking about the death of a loved one or even yourself is a heavy and rather burdensome thought, yet death is inescapable and must be thought about. When trying to decide what insurance policy to purchase one is inevitably left wondering, how can anyone put a price on a human life? It is impossible to do, but in spite of that, every life insurance company across the globe does it. How much are you worth? Did you ever stop to think about this? Does anyone? Would you even know how to figure out a numerical value that corresponded with *your* level of worth? This is the business of a life insurance company. With the help of actuarial formulas, life insurance companies are able to figure out the economic value of the human life. Intrinsically,

each human life is priceless. Economically some lives are worth more than others. The purpose of putting a price on a human life is to counterbalance the income lost upon the death of the insured. To look at the situation in the most simplistic way, an insurance company figures out how much one earned in life and uses this as a determinant of how much he or she is worth in death. According to Black & Skipper, insurance is defined as a "financial intermediation function by which individuals exposed to a specified contingency each contribute to a pool form which covered events suffered by participating individuals are paid" (2000, p. 37). Basically, life insurance reduces the financial drain caused by the death of an individual by apportioning this loss among a very large number of individuals.

As stated previously, putting a price on the human life is a very difficult task undertaken by life insurance companies. In order to determine the economic value of a life, many insurance companies use Human Life Valuation. This technique was first applied to the insurance industry in 1880 by Jacob L. Green. Human Life Valuation, as implemented by Green, is the measure of the actual future earnings or the value of services that will be rendered by individual. The human life valuation is subject to a loss when the individual dies prematurely, becomes incapacitated and can no longer work, retires early, or becomes unexpectantly and permanently unemployed. This means the actual future earnings of the individual would be less than expected if any one of the aforementioned events occur, causing a loss in the human life valuation estimate. When applying the human life valuation principle to life insurance, actuaries must rely on the law of large numbers, which states, "the greater the number of similar exposures (in this case, the lives insured) to a risk (i.e. death), the less the observed loss experience will deviate from the expected loss experience. Risk and uncertainty diminish as the number of exposure units increase" (American Council of Life Insurers, 2006). As the number of insured increase, the error between

the expected losses (deaths) and the actual number of losses tends to zero. Basically, the larger the group of insured individuals, the more predictable the actual loss will be. As a result, the losses as defined by the human life valuation method will be closer to the expected losses as determined by the insurance company. This will allow the insurance company to be better prepared financially for the payment of future claims (Black & Skipper, 2000).

Life insurance is unlike most other forms of insurance available, at least in the respect that the risk (i.e. death) it prepares for is unavoidable. Automobile insurance protects against the event that the insured gets into an automobile accident, a risk that may or may not occur. Death is a guarantee and the probability of it occurring in any given year increases with the age of the insured. The other forms of insurance may never have to pay out a claim to a particular individual, but a life insurance company will always have to eventually pay a claim (provided that the individual purchased life long insurance and does not let the policy lapse). With the certainty of an eventual claim payment, life insurance is far more expensive than many other kinds of insurance. No matter how expensive the policy becomes, life insurance rates are still theoretically calculated using only four factors. The first factor is the probability death will occur within a specified time frame. Second, is the time value of money (e.g., how much is $100,000 provided 40 years from now, worth today?). Third, the benefits promised upon the death of the insured are factored in. The more money promised, the higher the premium (i.e. monthly amount needed to keep the policy from lapsing). These three factors create what is known as the net rate (Carvajal, 2004).

Net Rate = probability of death + benefits promised + time value of money

To calculate the amount charged for a policy (i.e. the premium), this net rate is added to the loadings (i.e. the forth factor). Loadings are charges added to the policy to cover the various

administrative expenses, taxes, and contingencies, etc. This value is known as the gross rate and will be the amount that the insured has to pay to obtain said life insurance policy (Black & Skipper, 2000). When pricing life insurance, there are three objectives that should be met. First, premium rates should be adequate. Second, the rates should be equitable. Lastly, the required premiums should not be excessive. When pricing life insurance products, there are three laws of probability utilized. These laws are the law of certainty, the law of simple probability, and the law of compound probability (which often times involves Bayes Theorem). Premium rates are based on estimates of future probabilities of loss. These estimates are not valid representations of future experience unless there are a sufficiently large number of cases (i.e. the law of large numbers). A larger number of cases help to ensure that the actual loss deviates very minimally from the expected loss. The mortality statistics used to calculate the premium rates come from population statistics derived from census environments and the returns of deaths from registration offices. Some statistics can also be derived from insured lives (Carvajal, 2004).

Just as there is a standard on pricing a policy, there are a number of standard provisions that should be contained in every insurance contract. One provision is a grace period. This provision gives the policy owner 31 days to pay a premium and prevent the policy from lapsing. All policies allow the policyholder a certain amount of time to reinstate his or her contract, usually two years if certain number of requirements are met. This reinstatement provision requires that the policy was not surrendered for its cash value, the signed application was sent to the home office, the policyholder can prove insurability, and can guarantee that the premium will be paid for a certain length of time. Lastly, all policies should contain a free-look provision. This gives the policy owner a specified amount of time to cancel his or her policy and receive a full refund (Carvajal, 2004; Insweb, 2006; Quotesmith.com, 2006).

Life insurance policies typically involve an increasing amount of investment and a decreasing amount of insurance (Matteson & Harwood, 1959). As one holds a policy longer, they pay more premiums. The premiums start to accumulate in value (after expenses have been removed). As time passes, the amount of money paid out by the insurance company becomes less, because more of it is funded by the policy owners' premiums. If the policy owner were to die shortly after the purchase of the contract, then the insurance company would have to pay almost the entire claim itself. If however, the policy owner has had the policy for 60 years before death, the insurance company has far less to pay upon his or her death (Graves & Hayes, 1994; Hartford Financial Group, 2006; Insweb, 2006).

Obviously insurance is important part of society today, but why? In 2004, the life insurance industry had assets of $4.16 trillion. In the United States, the insurance industry creates the second largest sum of investment funds. In the middle 2000s, approximately 65% of Americans were covered by life insurance (Gale-Group, 2006). In a recent study done by the United Nations Conference on Trade and Development it was found that fist, life insurance can contribute to social stability because it permits individuals to minimize financial stress and worry. It also reduces the financial burden of the estate can accumulate funds to invest in the private and public sector, generate employment, minimize the disruption to business caused by the death of a key employee, and provide low-cost benefits to people who may not otherwise be able to obtain such protection (Black & Skipper, 2000).

As already mentioned, life insurance policies are used to compensate the income that is lost upon death; money is paid now to insure that it will be available later. There are plenty of other purposes for obtaining a life insurance policy. The policy can be used to provide a fund for emergencies, replacements, and repairs if and when the need arises. This is especially important

when the death is accompanied or followed, by some sort of natural disaster. This money will help the remaining family members piece back together whatever is left of their lives (Graves & Hayes, 1994). The most recent examples of this need are the families left destitute and heartbroken when Hurricane Katrina claimed both their homes and the lives of family members. If the insured dies at a young age and leaves behind young children and a spouse that were dependent upon him or her, the insurance money will be a source of immediate funds until other money becomes available. This is particularly important when the surviving spouse is not employed or must take considerable time off work (Black & Skipper, 2000). For those policyholders who support their parents, the money provided in the event of death can help to ensure the comfortable continuance of the parents' lifestyle, be that with a private nurse or in a residential facility. The money provided by the insurance policy can also help fund the college education of children when the time arrives or be used to set up a trust for the children. Lastly, the life insurance money could be used to pay for outstanding debts and loans at when the insured dies or to pay the taxes (e.g., estate taxes, gift taxes) and expenses that accompany the death of the insured (e.g., burial or cremation fees). Many personal debt agreements contain clauses specifying the full remaining balance of the debt will become due and payable upon the death of the debtor (Graves & Hayes, 1994).

While the ultimate function of a life insurance policy as shown above is to provide money upon the death of an insured, it can be useful to the insured while he or she is still living. The insured can take out money from the insurance policy as a loan at a discounted interest rate if he or she needs some extra money. The policy can be surrendered for a cash value amount to provide a source of cash as well. Certain companies even offer specialized policies that provide a

monthly check to supplement the income of an insured upon his or her retirement (Black & Skipper, 2004; Gale-Group, 2006).

The reason that there are so many functions for a life insurance policy is because, consumers today are different than they once were so must life insurance companies be as well. This can also be seen by the number of innovations that have occurred in the life insurance world in just this past century. Because of the way the market is set up today, life insurers cannot afford to offer both a low cost interest sensitive policy and long term guarantees. In order to do so, more risk has to be born by the policy owner. To keep buyers interested and willing to bare the cost and added risk, the insurance market has come up with a number of recent innovations. Premiums have been lowered in price through more refined risk classification systems and internal expense control. Policies now also offer increased flexibility and greater disclosure (American Council of Life Insurers, 2006).

Categories of Life Insurance

Even though innovations are a pivotal part of the insurance world today, the policies themselves have stayed relatively consistent over the years. Constant or not, there are still numerous kinds of life insurance sold in the United States. Luckily, most types of life insurance can be broken up into five categories: term life, whole life, universal life, variable life, and variable universal life. Each category of insurance has its own particular set of traits, strengths, and weaknesses. The simplest form of insurance offered by any company is yearly renewable term insurance. Term insurance provides life insurance covered for only a limited amount of time (i.e. a term). The face amount of the policy is paid only if the insured dies within this specified term period. If he or she does not die within this time frame, the policy will expire and nothing will be paid. For obvious reasons, this type of insurance is known as temporary

insurance. The terms customarily provided by an insurance company are 5, 10, 15, or 20 years. Once a policy has expired, it can usually be renewed for a certain number of extended years, be it another term or some time frame less than that (Graves & Hayes, 1994; Black & Skipper, 2000; Witkin, 2003; Carvajal, 2004; 1stQuote.com, 2006).

The premium for term insurance is low when the insured is young, but increases with age. The premium will remain constant during the term period, but will increase with each renewal that is made, reflecting the higher probability of death that accompanies older age. While the premium initially paid will be very low, it grows and becomes quite expensive as the insured ages. Additionally, if term insurance is purchased while young, there is typically no medical exam needed to ensure insurability. As a rule, no medical exam (i.e. proving insurability) is needed to renew the expired policy either, unless of course the insured has surpassed a certain age limit (most usually age 65). After exceeding the age limit, insurability will have to be shown with each renewal that occurs. Some companies, whether the insured is insurable or not, will not allow renewals of term insurance contracts after the age of 65, 70, or 75. Even if the company does allow renewals, term insurance can become so expensive in middle age and older that many policy owners will not be able to afford the monthly payments (Insure.com, 2003; American Council of Life Insurers, 2004). As the premium increases, those in good health will discontinue their coverage, but those in poor health will continually renew their policies. Policyholders in poor heath will bare the more expensive premiums because they will not be able to provide evidence of insurability for any other policy. This phenomenon is known as adverse selection and is very damaging to an insurance company. If companies allowed individuals over the age of 65, 70, or 75 to renew their policies, the insurance company would

have to pay more than the expected number claims. The insurance company could then face bankruptcy (Carvajal, 2004).

While still relatively early in the contract, term insurance can often be converted into another permanent form of insurance without proof of insurability. Term life insurance is beneficial to those who desire permanent life insurance coverage, but cannot afford the high premiums that typically accompany it. Term insurance is an alternative that is sometimes marketed toward individuals just out of college, starting on their own with little extra cash to spend insurance (Black & Skipper, 2000). When the policyholder starts to earn more money and consequently has more money to spend on insurance premiums, term insurance can and often is converted into permanent. When converting term insurance into a permanent form of life insurance, if the date of the new policy starts on the conversion date, the attained age method was used. When given this circumstance, the premium will be larger than the premium that would have been quoted had the permanent policy been purchased originally, because the policy owner's current age (age at the time of conversion) determines the amount of the premium that is paid. If the new policy is converted retroactively as of the original date of the term policy, the original age or retroactive conversion method was utilized. The premiums paid would be based not on the policy owner's current age, but upon his or her age when he or she first purchased the term insurance policy. In this case, the premiums would be lower than they if the other method were used. In order to take advantage of this "discount" the conversion must typically be made within the first few years after the term policy is first issued. When converting term policies to permanent life insurance, the policy owner will be billed adjustment charges. These charges are financial adjustments so as to place the company in the same financial position it would have

had, had the permanent contract been issued in the first place (Insure.com, 2003; American Council of Life Insurers, 2004).

Term insurance is useful when the protection desired is temporary or, as stated previously when permanent insurance is desired but financially impossible to obtain. There are also many reasons why someone would want or need temporary insurance other than as a cheaper alternative to the more expensive permanent life insurance. Temporary insurance may be desired to hedge a loan (i.e. protect the lender against possible loss), and it would also relieve the estate of the burden of repaying the loan if the policy owner does die (Carvajal, 2004). This form of insurance can also be used to protect the family and estate of a policy owner who had invested heavily into a speculative and unreliable business adventure. The most popular reason policyholders obtain term insurance is to provide temporary additional protection their children while they are still dependent. If the policy owner dies during the early years of his or her children's lives, they would be left without one of their primary providers. Term insurance will guarantee that they are taken care of even when you cannot be there anymore (Graves & Hayes, 1994; Black & Skipper, 2000).

Term insurance can be helpful for many of the reasons mentioned above, but some consumers overestimate the advantages of term insurance. Many consumers erroneously believe that term insurance is better than permanent forms of insurance. Some consumers believe that permanent insurance policies overcharge because the premiums associated with permanent insurance are typically much larger than those paid for term insurance. Many consumers also believe that the accumulation and protection elements offered with permanent insurance should be separated much like they are with term insurance. Term insurance provides only protection and leaves the accumulation of funds up to the policy owner's discretion. Some consumers

believe that they can more wisely invest their own money than can the insurance company. The consumers who believe this, typically will prefer the BTID method (i.e. buy term and invest the difference). This method is not recommended, but some consumers are obviously willing to take this gamble. In reality however, consumers are only better off financially by buying term insurance rather than permanent insurance when they are *sure* they will die within a short time. In this particular case though, the consumer would not even be insurable. Most policy owners will live to an age where the total premiums paid under term insurance will exceed the total premiums paid with a permanent policy. If one intends to purchase permanent insurance and can afford it, there is no need or advantage to purchasing term life insurance first with the purpose of converting it later (Black & Skipper, 2000; Witkin, 2003).

If a consumer is interested in purchasing permanent life insurance coverage and can afford it, there are a number of different options to choose. The most simplistic option is whole life insurance. Whole life, like other forms of permanent life insurance, provides payment regardless of when death occurs. There are no terms, no cut off dates, and no expiration. Whole life insurance can be broken up into two segments, ordinary whole life and limited premium whole life (Black & Skipper, 2000). Ordinary life is also known as continuous premium whole life. Under ordinary life policies, constant premiums are paid throughout the policy owner's entire life. Ordinary whole life is the most basic life long policy offered and has as a result the largest number of sales (Witkin, 2003). Perhaps part of this popularity is also due to the fact that out of all of the permanent insurance policies issued; this policy is accompanied by the lowest premium. All whole life policies will guarantee protection as long as the individual lives and pays his or her premiums regardless of what his or her health condition is like prior to death. On the downside, these policies put emphasis on higher protection, which unfortunately is

accompanied by a lower cash accumulated reserve (Black & Skipper, 2000). This should not be much of problem unless the policyholder's only objective for buying the policy is to cash it in later. These policies are quire flexible because they provide non-forfeiture and surrender options. The policy can be surrendered at any time for its accumulated cash value (an amount less than the death benefit). In surrendering the policy however, it does render the contract null and void and the insurance protection will cease. Surrendering the policy is one option that can be utilized to prevent forfeiture. Another option available to avert forfeiture is to take a reduced amount of paid-up whole life insurance, payable upon the same conditions as the original policy. If the policy owner does default on his or her premiums, most insurance companies will automatically change the policy into paid-up term insurance for an amount equal to the original face amount of the policy. In doing so, the insured is covered for the same amount, only for a shorter time. This is not just a method to prevent forfeiture of the policy. Many individuals approaching retirement age and facing a reduction in income find this option particularly appealing. It frees up some extra cash and still allows them coverage for some time into the future. If the policy owner does not find any of these options appealing, he or she could elect to borrow from the policy's reserve in order to pay the premiums (Graves & Hayes, 1994; Black & Skipper, 2000).

Many families purchase more life insurance to protect their families during the child raising period with the specific objective to eventually use the accumulated cash value for their own retirement. The cash value of an ordinary life policy purchased at 25 will be worth between 50 and 60% of its face amount at the age of 65 (retirement age). A policy with a face amount of $1,000,000 purchased at age 25 can be surrendered for between $500,000 and $600,000 at age 65. This is not a bad retirement option. The only thing caveat with this scenario is, once the

individual cashes in his or her policy, he or she will no longer have any more insurance coverage. Another advantage of whole life insurance is that it can be converted into other types of policies without the provision of evidence of insurability (provided however, that the new contract has a larger premium than the original contract) (Graves & Hayes, 1994; Black & Skipper, 2000).

Under limited payment whole life policies, premiums are only paid during a specified period, usually about 20 or 30 years or to the age of 60 or 65. Because the policy must be paid for in a shorter amount of time than an ordinary whole life policy, the premiums will be larger, but on the other hand, they will not have to be paid forever. The disadvantage of limited payment policies is, few people can afford the premium or are willing to pay that much money in advance. The more premium payments paid, the more closely the policy resembles an ordinary whole life policy. The basic objective of limited payment policies is to enable policy owners to pay for the policy during their working years, when cash is still viable (Graves & Hayes, 1994; Black & Skipper, 2000; Witkin, 2003). As a perk, and a consequence of the higher premiums paid, this policy develops greater cash and surrender values. This means that the policy can provide a larger fund for use in an emergency and will accumulate a larger fund for retirement then does the ordinary life policy.

If the policy owner lives a long life, he or she will ultimately be paying less with this form of whole life than with an ordinary whole life policy. As stated before, the number of payments needed to pay for a policy can fluctuate, depending upon how much the insured is willing and able to pay for each premium. The most extreme example is the single payment premium. Under this policy only one very, *very* large payment is made. This policy typically provides less insurance protection and is most often used for cash accumulation purposes. The

single premium whole life policy will generally offer a bailout provision. If the interest rate falls below a certain level, the policy owner may surrender his or her policy and incur no surrender charges. This policy is ideal for individuals who suddenly come into contact with a large sum of money, be it through inheritance, winning the lottery, or other reasons (Graves & Hayes, 1994; Black & Skipper, 2000).

Another modification of the typical whole life policy is the vanishing premium contract. Under this policy the company uses the policy owners dividends (if given) to pay all of the premiums due after they have accumulated enough to do so. Dividends are not a provision of all companies and are not guaranteed even if they are offered. Hence, the dividends may never accumulate enough to pay for the premiums. Even with this limitation, this policy is still more popular than regular whole life policies (Carvajal, 2004). Another variation on the traditional whole life policy is the flexible enhanced ordinary life policy. This particular policy is a combination of whole life, term life, and paid up additions in such proportions to allow the policy owner to establish a comfortable premium. This contract requires a minimum amount of whole life and then permits additional amounts of term insurance to reach the level of coverage desired 9 Black & Skipper, 2000). Graded premium whole life is another variation of the traditional whole life policy. Under this policy, premiums begin at 50% less than those of ordinary whole life policies. These premiums will increase annually for between 5 and 20 years and then remain constant there after. The only disadvantage with this particular policy is that the cash value will grow more slowly than those of an ordinary whole life policy. Therefore, if cash accumulation is the goal, this policy would not be recommended (Witkin, 2003; American Council of Life Insurers, 2006).

As a last note on whole life insurance, there are some companies that will cater to individuals who are in impeccable condition. These companies will offer "minimum face amount" or "preferred risk" policies. These policies offer face amounts from $5,000 to $25,000 at a lower cost than an ordinary policy would. The only caveat is the individual elected to receive this particular perk must be in *perfect* health. There are also some companies that will provide whole life policies that have an endowment at the age of 100 equal to the face amount of the policy. Even though this is still whole life insurance, it could be classified as endowment insurance, which will be discussed in further detail later. Under this provision, if the policy owner dies before age 100, the benefactor(s) will receive the death benefit. On the other hand, if the policyholder lives past the age of 100; he or she will receive his or her own "death benefit." This could be something to look forward to (Graves & Hayes, 1994; Black & Skipper, 2000).

This idea of living to see your own death benefit is the essence of endowment insurance as mentioned above. Though it has not been popular in the United States since 1984, it is worth mentioning because of its similarity to the provision sometimes provided by whole life contracts, and because it is still wildly popular outside the United States. Endowment policies are attractive to the "mature" older market because the cash can be used during their own lifetime. Under an endowment policy, the policy owner pays a fixed premium for a specified length of time called the "endowment period." At the end of the endowment period, if the individual is still alive he or she will receive the face amount of the policy and the insurance will be discontinued. If the individual dies before the end of the "endowment period," the death benefit will go to his or her benefactor(s). The endowment period could be as long as 100 years, but is typically much shorter, usually lasting until around retirement age. There is a very large cash surrender value associated with this type of insurance, but the premiums are also particularly high. Perhaps the

expensive premiums are partially responsible for this insurances falling out of American favor. On the other hand, the advantage of endowment insurance is that it provides a convenient method of saving especially for the individual who would not other wise do so. The major disadvantage of this policy as life insurance coverage that it provides less insurance for a given expenditure than whole life insurance would (Graves & Hayes, 1994.)

Another important but unpopular form of insurance worth mentioning is adjustable life insurance. Adjustable life insurance formed in 1971, but never really caught on in the United States, perhaps because it was soon taken over by more innovative forms of insurance. This policy gives the policyholder the right to request and obtain a reconfiguration of the policy at specified intervals. Other than this slight modification, adjustable life insurance offers all of the same guarantees regarding cash values, mortality charges, and expenses as do traditional whole life policies. However, under adjustable life the premium, face amount of the policy, and cash value are all subject to change. Most of these adjustments can be made without providing evidence of insurability. There are a number of life events that prompt the need for adjustment, such as children starting private school or entering college, the youngest child gaining independence and self-sufficiency, the policyholder or their spouse becoming unemployed, starting a new business venture, or simply changing careers. Most of the adjustments associated with these life events involve the lowering of the premiums paid, but an increase in premiums can also occur if wanted. Keep in mind, these adjustments must occur at scheduled times and in between schedules the policy premiums will remain inflexible (Black & Skipper, 2000).

Adjustable life insurance was partially pushed out of the lime-light by the introduction of variable life insurance in 1976 by the Equitable Life Assurance Company of New York. The distinguishing main feature of variable life is the investment risk is shifted from the life

insurance company to the policy owner (Graves & Hayes, 1994). The policy has a required premium payment, but provides no guarantees for either the interest rate or a minimum cash value. Some of the premium in the contract goes to separate accounts and is used with money from other policy owners to purchase stocks and bonds or to build interest. A change in the policy's cash value has a direct impact on the size of the death benefit provided. The first generation of variable life insurance gave policy owners three investment options for their separate accounts. These separate accounts were essentially mutual funds run by the insurance company with fund allocations being directed by the policy owner. A minimum of 5 to 10% of incoming funds had to be allocated to any investment options chose (Waddell, 1998). The cash accumulation associated with a variable life policy is subject to daily portfolio changes and can provide a great deal of anxiety for the policy owner if he or she is not used to, or comfortable with, such fluctuations. Because these policies are closely tied to stocks and bonds, their popularity is influenced by the general market condition. Great market conditions can allow the policy owner's money to work harder than it would were it used to purchase an ordinary whole life policy. Likewise, a bad market could loose the policy owner's money. With such close dealings with investments, many policy owners misinterpret the true function of the policy. It must not be misunderstood; these policies are first and foremost life insurance and not short-term investment options (Black & Skipper 2000; Carvajal, 2004).

If the policy owner feels that they cannot make the required decisions regarding where to invest their premiums, they can elect to have their money put into a managed fund and have the investment allocation decisions made by a professional manager working for the insurance company. Even so, the cash value will still fluctuate daily (Carvajal, 2004). Because of the investment side of these policies, they cannot be legally sold without a prospectus. A prospectus

provides a full disclosure of all of the provisions of the contract. By reading the terribly long and tedious prospectus, the insured can learn about what the policy entails and what exactly they are getting themselves into. An advantage of this particular policy is it guarantees a minimum death benefit equal to the original face amount of the contract, regardless of how badly ones investment performance turns out to be (Graves & Hayes, 1994; Black & Skipper 2000). For example, a policy with a death benefit of $1,000,000 will be worth at least $1,000,000 upon the death of the individual even if his or her investment tanks. This same policy could be worth considerably more if the policyholder's investments do very well. Unlike the death benefit though, the cash accumulation has no such guarantee. There could be considerably more accumulated cash than would occur under an ordinary whole life policy, or there could be drastically less. This is why this policy is so appealing to those who desire whole life but want the capability of receiving equity type gains (or losses) (Waddell, 1998).

The development of variable life was not enough to completely appease the wants of the American consumers so, universal life insurance was developed. In 1979, E. F. Hutton Life introduced universal life as a way to enhance consumer protection. Even though universal life was not officially introduced until 1979, the idea of it was developed in 1962 by George R. Dinney of Great-West Life. Dinney's idea was later publicized by James C. H. Anderson, but did not become a reality until 1979 as was already mentioned (Graves & Hayes, 1994). Universal life is different because it separates the components of the life insurance policy into the insurance element (protection), the savings element (accumulation), and the expense element (loading). In contrast, term life has only the insurance and expense elements. And while ordinary whole life has all three elements, they were meshed together into one indissoluble whole. Unlike the other contracts just mentioned, universal life policies are transparent (i.e. the policy owner is able to

see how funds are apportioned to each of the various elements just mentioned) (Waddell, 1998; Winn, 1999). To further distinguish universal life from the rest, the policy premiums paid are completely flexible after the first policy year. However, a caveat does exist with this near perfect sounding insurance coverage. If the policy cash value is allowed to drop too low, the policy will lapse. This is a principal disadvantage of universal life policies because many policy owners do let their policies lapse (Carvajal, 2004). To ward off this problem, many companies include a no lapse guarantee in the contract. The policy will not be allowed to lapse if a stipulated minimum premium is paid (i.e. the minimum continuation premium). Even if this minimum amount is not enough to cover the policy, if it is being paid each month the policy will not lapse (Black & Skipper, 2000).

By putting money into a universal life policy early, this money will start to earn money and then reduce the amount of the premium payments required later (Winn, 1999; Black & Skipper, 2000). Unlike most other forms of life insurance, under this contract, the policy owner can make partial withdrawals from the policy's cash value without suffering indebtedness. The policyholder has no obligation to pay these funds back because they are not considered to be a loan. It must be understood that while this money does not have to be paid back the cash value of the policy will be reduced by this amount until the money is paid back (Waddell, 1998). Lastly, these policies also allow the policy owner to choose between level death benefits and increasing death benefits. A level death benefit is rather self explanatory. The death benefit provided when the contract is first purchased is the same as the death benefit provided upon death of the policyholder. A level death benefit is also known as "Option I" or "Option A." Under an increasing death benefit rider, the death benefit gradually increases until the policy owner dies (Graves & Hayes, 1994).

As if variable life and universal life were not enough, the insurance industry took the best of both worlds and created variable universal life. Variable universal life was first offered in 1985 by a subsidiary of Prudential Life. Today it is the fastest growing form of life insurance on the market. It is also the most complex life insurance product available. Variable universal life policies are classified as securities and must be sold as such. These policies can be thought of as incorporating a savings account, the tax differed interest of which can be used to purchase life insurance and cover the policy's expenses. Much like variable life insurance, the policy owner gets to choose the investments and has no guaranteed interest rate or cash value. Again, it must be mentioned, these policies are not short-term investment vehicles, but life insurance coverage and must be thought of in no other manner. Like universal life, these policies offer flexible premiums and allow partial withdrawals (Graves & Hayes, 1994).

Variable universal life policies are typically designed to meet the individual needs of the policy owner and as a result have been growing in popularity. This policy provides permanent life long insurance protection like whole life and also boasts of the same tax-advantaged basis as do traditional whole life cash values. The cash values are invested in separate accounts, separate from each other and separate from the company's general account. The policy owner is allowed to transfer assets and redirect their future premiums from one account to another at their own discretion, free of charge (Graves & Hayes, 1994; Black & Skipper, 2000; Witkin, 2003). Insurance companies offer a wide variety of investment accounts including but not limited to, stocks, bond funds, fixed rate funds, managed funds, and asset allocation funds (Dearborn; 1999). Which investment is chosen is dependent upon what the policy owner believes is the objective of the policy. If the policy owner has capital appreciation as an objective, then he or she should invest in ordinary stocks or aggressive stocks that target a specific industry. If the

policyholder's objective is income, he or she should consider investing in the money market, government securities, or bonds. Lastly, if the policy owner's objective is for both growth (capital appreciation) and income, he or she should think about managed funds (i.e. a mix of common stocks, preferred stocks, bonds, and money market instruments), global funds (i.e. a mix of stocks and bonds from companies and governments around the world), or real estate funds. To reduce the overall financial risk of their investment the policy owner should choose a combination of the aforementioned accounts. All earnings on an account are managed by professionals and automatically reinvested (Carvajal, 2004; Epstein, 2005).

Like universal life, variable universal life also offers two death benefit options; level death benefits and fluctuating death benefits. The level death benefit for the variable universal life is the same as the level death benefit for the universal life. With the fluctuating death benefit option, (i.e. "Option II," "Option B") the death benefit is always at the very least equal to the level of pure insurance protection of the policy. It can grow and diminish based upon the outcome of the investments but never drop below this set level (Graves & Hayes, 1994; Dearborn; 1999; Black & Skipper, 2000; Witkin, 2003; Carvajal, 2004). After one year, the policy owner can change from a variable death benefit to a level death benefit without providing proof of insurability. However, if he or she wished to change from a level death benefit to a variable one, proof of insurability must be provided (Epstein, 2005).

The expense charges assessed when purchasing a variable universal life policy must be fully disclosed in the policy like they are with a universal life policy. The deductions made from the premiums (i.e. expenses and loadings) may be lower, but never higher than those stated in the contract (Epstein, 2005). As stated before, these policies are developed to meet the policy owner's needs and can often be written in such a way as to allow for unpredictable financial

setbacks, and by allowing policy owners to control the amount and frequency of the premium payments being made (within reason). If the policy owner chooses to pay more than the scheduled premium he or she can increase the cash value accounts which may or may not increase the death benefit. The policy owner does not need to pay a premium, but like with universal life, if the premiums are not paid and the cash value accounts experience a sustained investment loss (i.e. negative growth) and do not have enough funds to pay the required monthly premium the policy runs the risk of lapsing (Black & Skipper, 2000). There are also maximum premium limits that prevent policyholders from treating their policies as insured, tax-sheltered investments rather than life insurance. High amounts of additional premiums will automatically increase the policy's death benefit (Carvajal, 2004).

Variable universal life policies are appealing to individuals who like control and competitive growth potential. These policies are most likely to be chosen by those with dependents, earn above average income, or have a greater willingness to take on risk. The securities providing the greatest potential return also hold the greatest market risk (i.e. the risk that ones investment principal may decrease in value), interest rate risk (i.e. interest rates increase, thereby lowering prices and depressing the value of the current investments) and inflation risk (i.e. the risk that inflation will erode the real value of the investment gains) (Graves & Hayes, 1994; Dearborn; 1999; Black & Skipper, 2000; Witkin, 2003; Carvajal, 2004; Epstein, 2005).

Lastly, variable universal life policies have specific provisions not privileged to other types of policies. First and foremost, these policies have an exchange (conversion) privilege in which the policy owner has the right to exchange the policy for a comparable non-variable plan (Carvajal, 2004). These contracts provide annual reports that supply information on the death

benefit payable, total cash value, net cash surrender value, premiums paid since the last report, total charges deducted since the last report, policy loans, interest charged on loans, partial surrenders made, and transfers of funds among the accounts (Epstein, 2005). As has been shown, variable universal life is particularly useful for individual who want to treat their life insurance policy cash values as more of an investment than a savings account. Again, it is worth mentioning, variable universal life is first and foremost life insurance and not an investment (Graves & Hayes, 1994; Dearborn; 1999).

As a recapitulation on the policies available, the five major ones are: term life, whole life, variable life, universal life and variable universal life. All permanent policies, no matter what category, have three key features: premiums (both flexible and not), a death benefit (that may or may not change with time), and a cash value (that may or may not be guaranteed). For whole life, these features are all fixed and determined at the time of purchase. Variable life has flexible cash values but inflexible everything else. Universal life is inflexible in everything except the premium payment, but variable universal life is flexible for all three. It must be noted that variable universal life has a minimum premium that must be paid if a premium is chosen to be paid at all. This net premium (gross premium – expense charges) goes directly into a separate cash value account of the policy owners choosing and can at the policy owner's discretion have a fluctuating death benefit as mentioned before.

Lastly, there are policies that will accommodate more than one person (i.e. multiple life insurance). Joint life insurance is sometimes known also as the first-to-die joint life policy. This policy can belong in any of the permanent insurance categories mentioned above and is payable upon the death of the first person to die. After the first person dies, the remaining spouse is no longer has any life insurance coverage. Typically, in such cases the insurance company will give

the widow or widower a chance to purchase a whole life policy without having to provide proof of insurability. The second type of joint policy is the second to die policy or as it is better known, a survivorship policy. This policy becomes payable upon the death of the last person to die. It can be written to cover anywhere from 2 to 12 people and is usually a whole life or universal life contract. The premium paid under this contract is level before the death of the first individual and then increases after that death to remain level at this new higher rate until the death of the second individual. With both types of joint life, the premiums paid are higher than those paid for single policies because one is paying for coverage for two lives. While the premiums are higher than single life insurance, they are still fairly low. Most insurance companies will typically allow these policies to be converted into single life policies in the event of a divorce. This split option usually provides two policies both with low premiums and high face amounts (Carvajal, 2004).

There is also family insurance, a form of whole life which covers every family member under one contract. The insurance provided on the children is typically term insurance, lasting for a period until the child reaches adulthood. Juvenile insurance also exists in the whole life form. Most policies require that the child is at least one month old. These policies provide funds for long lasting illness, funeral expenses, and a college education. These policies start with very low premiums and can be beneficial because they insure that the child has some life insurance coverage even if he or she later becomes uninsurable. Lastly, in 1930, there developed what became known as pre-need insurance. This insurance has a small but expanding market in the United States today. It is used to fund a prearranged funeral. And is particularly appealing to those who want to take care of their own funeral arrangements or who do not want to burden their families with such a task once they have departed (Carvajal, 2004).

With all of these insurance policies available one has to wonder, who could supply them all? In the United States there are currently 1,700 insurance companies. The vast majority of which are stock owned companies (i.e. publicly traded). The rest are mostly mutual life insurance companies. In a stock insurance company, the corporation is authorized to sell life insurance, but the company is owned by stockholders and is organized and incorporated for the sole purpose of making a profit for these stockholders. The policy owners have no ownership in the company. A mutual life insurance company on the other hand, is owned and operated for the benefit of the policyholders. The policyholders get to share in the corporate profits through dividends. The policyholders also get to elect a board of directors who run the company for them. In addition to these differences, it can be noted that mutual companies are generally older and larger than most publicly traded companies of the same caliber (Gale-Group, 2006).

It is important to know about the different companies and the policies they offer because "the majority of buyers do little or no comparison shopping and may possibly make unsound decisions regarding the particular type and amount of insurance to buy or even the insurance company from which to buy it." (Black & Skipper, 2000, p. 247). If one has very little knowledge of insurance and is trying to decide upon a policy to purchase, the experts recommend to use a competent, informed, and trustworthy insurance advisor. If one does not want to use an insurance advisor, there are a couple of things to keep in mind when shopping for a policy. First, there are three marketing channels that insurance companies use to attract future clients. The first channel consists of marketing intermediaries. Marketing intermediaries are individuals who sell insurance products on a face to face basis. This is the stereotypical method of insurance sales and is the most widely utilized channel today. Insurance can also be sold

through financial institutions (e.g., banks). The last marketing channel is the direct response channel. In a direct response relationship, the customer deals directly with the insurer, typically through the mail, telephone, print media, or electronic media. Because the use of an insurance agent to sell insurance is so prevalent in our society, it would be beneficial to know about the different classes of agents. The most common insurance agent is the career agent. He or she is commissioned and sells insurance products for one particular insurer. There are also multiple line exclusive agents. These agents are also commissioned, but sell insurance products for a group of affiliated insurers. The most stereotypical insurance agent is the home service agent. This agent is assigned a particular geographic area and sells insurance door to door. The number of these agents has fallen by 76% in the last 15 years. Lastly, there are the salaried agents. These agents do not make a commission on the insurance products they sell (Black & Skipper, 2000; Carvajal, 2004).

A Qualitative Comparison from a Consumer's Perspective

Now that the history, different sorts of products sold, and selling methods have been discussed, the literary review section of this paper is complete. It will be helpful to look at specified policies from particular companies. The first company, Northwestern Mutual, was chosen because it is a leader in life insurance and is a mutual company. The other company chosen is The Hartford, for it too is a leading seller of life insurance but is a publicly traded company. Both companies offer between 10 and 15 policies each, designed to meet their consumers needs.

Both companies offer a form of term insurance. Northwestern Mutual offers four different term life policies, Term 80, Term 10, Level Term 20, and Level Term 10. Northwestern Mutual's Term 80 is a low cost insurance and is appealing to individuals who cannot afford

insurance coverage but want it. It will also allow the insured the ability to convert his or her policy to permanent insurance without proving insurability up to age 60, if one purchases the policy between the ages 18 and 45. If the policy owner purchased the policy between the ages of 46 and 55, it can be converted during the first 15 years of the policy. No policy can be converted past the age of 75. This is likely done to prevent adverse selection (Northwestern Mutual Financial Network, 2006). Term 10 insurance is recommended for individuals who own an expanding business and want protection for their increased financial responsibility. As the name implies, this policy will provide coverage for 10 years, but can be converted to permanent insurance only during the first three years of the contract. Level Term 20 provides benefits for 20 years but can be converted during the first 10 years. Level Term 10 provides coverage for 20 years and is recommended for individuals who have children in college, an outstanding mortgage, or a business need. The premiums paid are level for the first 10 years, and then increase to a higher premium for the remaining 10 years of coverage (Northwestern Mutual Financial Network, 2006).

The Hartford, on the other hand, only offers two term policies, the Stag Custom 10 and the Stag Custom 20. Both policies can be renewed up to age 95 with increasing premiums. Both policies can be converted to permanent life policies during the first three years with a retroactive conversion being used (The Hartford Financial Services Group, 2006). As the short description of what The Hartford offers implies, the policies offered by The Hartford are more generic than those of Northwestern Mutual. Given the circumstances of my life as they are and soon will be, I believe that a term policy would be the best choice for me right now. I would like insurance but do not have the funds available to afford whole life. Which company offers a better policy is a very subjective decision and must be left up to the individual. I believe I would like to purchase

the Level Term 20 from Northwestern Mutual. This policy is both affordable and functional. It will provide reasonable coverage for lower premiums and also allow me to convert it to a whole life policy when I am financially able to do so. Both of the policies offered by The Hartford seem workable, nevertheless, I highly doubt that I will be financially able to convert my policy into a permanent one in three years or less. Although, I do like the fact that The Hartford offers a retroactive conversion because this requires lower premiums for the same amount of coverage. Now, if I were starting to have children, another time when term policies are useful, I believe the Stag Custom 20 would be best. I will probably have no need to convert my policy into a permanent contract, but I will want to have the extra coverage until my children are no longer independent. I do not believe I would like my premium to increase after 10 years and therefore, I would probably choose the Stag Custom 20.

Again, both companies offer whole life insurance. The Hartford only offers one policy, Stag Whole Life. This is a non-participating whole life policy, which means the policy owner will not be paid any dividends. This makes sense, for The Hartford is a publicly traded company and not a mutual company. This policy offers an income tax-free death benefit with guaranteed 4% interest crediting, fixed and inflexible premiums and tax free loans (Northwestern Mutual Financial Network, 2006). Basically, this is your standard ordinary whole life policy although, the tax free loans are a nice perk. Northwestern Mutual offers four whole life policies, 90 Life, 65 Life, Select 100, and Single Premium Life Insurance. The company says that 90 Life is "ideal for an initial life insurance purchase." This is a participating whole life policy, meaning that dividends will be paid. There are a number of different options when receiving dividends. The policy owner could use the dividends to purchase additional coverage increasing the policy's face amount and cash value. The dividends could also be used to reduce premium payments each

month. Lastly the policy owner could elect to receive these dividends in cash (Northwestern Mutual Financial Network, 2006).

What an individual chooses to do with the premiums is determined by the objective of the insurance and the need or desire of the policy owner. If the decision were left up to me, I would choose to use the dividends to purchase additional coverage until I reached retirement age. At which time, I would use the dividends to lower the premium I would have to pay considering my reduced income status.

With 90 Life, premiums are paid up to the age of 90. This policy and all of the others have a number of non-forfeiture options. The first is an automatic premium loan. The money needed to pay the policy is automatically borrowed from the cash value with interest being charged until the loan is repaid. Another option is to keep the full death benefit in force by using the cash value of the policy to purchase extended term insurance. The third option is to keep some level protection in force by taking the policy's cash value and purchasing paid up whole life. Lastly, the policy owner could elect to surrender the policy for cash (Northwestern Mutual Financial Network, 2006). 65 Life is a limited payment whole life policy, meaning the policy is fully paid for by age 65. Because there are fewer premium payment years, the premiums will be higher, but they will accumulate to a higher cash value sooner than the 90 Life or any other longer policy. Other than being paid off by age 65 rather than 90, this policy has the same benefits as 90 Life. The Select 100 offers the lowest whole life policy premium offered (Northwestern Mutual Financial Network, 2006). As such, the cash value will accumulate at a much slower rate than the other policies mentioned above. The last policy is an example of the most extreme type of limited payment whole life, the Single Premium Plan. Only one payment is necessary to pay for this policy. This requires a large sum of money and is not ideal for many,

myself included. Unless I somehow come into a large sum of money by winning the lottery that I do not play or an inheritance from a rich relative that I do not have, I will not be purchasing this policy any time soon. While the policy offered by the Hartford seems very reasonable, I like the idea of receiving dividends, even if these dividends are not guaranteed.

Assuming now that I am 30 and have established my career and perhaps have gotten married, I believe the 65 Life offered by Northwestern Mutual would be the policy that I would want. Granted, the premiums are considerably higher, but by the time I am 65, they will no longer have to be paid. The dividends would be used to increase my cash value and death benefit rather than receiving them in cash. Another reason why I would choose this option is because it has a faster and larger cash accumulation than does the other policies. If I should need the money there would be more of it to be had for whatever purpose needed.

The Hartford does not offer any form of adjustable life probably because it is not popular in the United State, but Northwestern Mutual offers a contract much like it. The Adjustable CompLife, as it is called, is almost like a traditional adjustable life policy with premiums paid until age 90. It allows the policy owner to make changes just as an adjustable contract would (Northwestern Mutual Financial Network, 2006). I believe this would be beneficial for me if later I decided that I would want to change my death benefit for whatever reason, job promotion, paying for college educations, etc. It is a wonder why one just does not get a universal life contract unless of course, one knows they would not pay the premiums unless forced to do so. This policy is a practical option for some, but not really what I am looking for.

Both Northwestern Mutual and The Hartford offer universal life products. Northwestern Mutual offers three universal life policies, Custom Universal Life Accumulator, Custom Universal Life Protector, and Survivorship Universal Life. The minimum premium the first year

is $25,000; quite a hefty sum. After which, the premium amounts paid are left up to the policy owner per the custom of universal life. Northwestern Mutual also offers a minimum interest rate, allows the policy owner to borrow at 5% interest, and for a fee, will allow the insured to withdraw money from the policy (Northwestern Mutual Financial Network, 2006). This policy would not be ideal for me until I could afford the first premium. Assuming that I could afford this sum and needed a $1,000,000 dollar contract, this would be an ideal policy. I like the idea that I can choose how much to pay each month in premiums. On the other hand, I recognize that I am one of those people who have to be forced to do anything before it will get done. I would be afraid that I would unintentionally let my policy lapse. Now the Custom Universal Life Protector would be more for me because it will not lapse as long as certain levels of premiums have been paid. This way, once this level has been met, I could reasonably continue on in my absentmindedness and never have to worry about accidentally losing my life insurance coverage. The Survivorship Universal Life covers two people and pays upon the death of the second of the two policyholders (Northwestern Mutual Financial Network, 2006). This is a very standard second-to-die life policy. Again like the Custom Universal Life Protector, if the policyholders pay a certain level of premium the policy will remain in force. This policy is very flexible and ideal for many couples. It is always a good idea to get an increase in insurance upon marriage and what better way to do so then with a joint contract? The couple does not necessarily have to buy a joint life policy and frankly, I would not recommend it given the divorce rate that exists today anyway. It is always nice to have the extra coverage in the event that one of the two dies.

The Hartford offers four universal life products, three single life products and one survivorship policy as well. All of these policies can be equipped with a level or increasing death benefit. Again like any universal policy, the premiums are flexible and a minimum interest rate is

guaranteed (The Hartford Financial Services Group, 2006). Both companies are offering very similar policies so choosing between them would be difficult. I think the increasing death benefit would be something that I will be interested in, so I am inclined to choose a universal life policy from The Hartford. The joint life policy would be beneficial for when I get married but then again, perhaps it would not be the most practical option. I really like the flexibility that universal products offer but, as I have said before, I am one of those people who have to be prodded before I will do anything. I fear with so much flexibility, I will not pay enough in premiums to keep my policy in force. I honestly think it would be better if I settled on a whole life policy.

Northwestern Mutual offers three variable life insurance contracts, but The Hartford offers five variable universal life products (Northwestern Mutual Financial Network, 2006; The Hartford Financial Services Group, 2006). While they are not the same type of product, they are similar enough to allow for an appropriate comparison to be made. Northwestern Mutual offers 24 investment choices; a far cry from the original three offered. Some of the variable products offered guarantee the face amount of the death benefit but others do not. None of the products can guarantee the cash value as is typical of any variable insurance policy. Northwestern Mutual also provides a summary of information regarding the various funds they offer and who would want to invest in them. Because I would like to see both growth and income, Northwestern Mutual suggests that I invest in their Asset Allocation Fund or Balanced Fund (Northwestern Mutual Financial Network, 2006). Both of these funds are middle of the road on both risk and reward, which is appealing. This policy suggestion is nice, especially for individuals such as myself who know very little about investments. From what I do know though, I do not think I could handle the uncertainty that accompanies very risky funds nor would I be happier with relatively stable funds. Middle of the road investments would suite me well, provided my tastes

do not change between now and the time I purchase such a policy. Even though there is more to gain with the more risky funds associated with a non-guaranteed death benefit policy, I do not know enough about the stock market to calmly deal with the fluctuations (jumps and dives) associated with such funds. For this very reason, I am going to have to choose a moderately stable fund. In addition to the middle of the road investments, I also think I would have to have a contract guaranteeing minimum death benefit.

All of the policies offered by the Hartford, per variable universal life style, have flexible premium payments which allow the policy owner to increase or decrease insurance coverage as needed and have moderately aggressive risk profiles. These policies have a permanent death benefit protection and allow the policy owner to withdraw money via interest-free loans (The Hartford Financial Services Group, 2006). Without going into further detail it is clear that The Hartford excels at variable universal life. Because The Hartford offers so many options to the consumer, I would have to choose a product in this particular category from them.

As one can see, different companies offer different products and to be an informed consumer, one must shop around for a while until he or she finds a product that best suits him or her. The question everyone asks, is a mutual company or stock owned company better can best be answered in this way; it depends on what one is looking for. As my analysis shows, both types of companies have their own merits and the decision of which one is better must be left up to the consumer. The question asked should not be which company is better, but which company is better for me? I have learned that this is the question every consumer needs to ask about everything involving insurance. We must each ask ourselves, 'What am I looking for? Why do I want or need insurance? What kind of result am I searching for?' In the end, once all of the parts

to this question have been answered, we can be more informed when "shopping" for the policies that will fit our needs and work to our advantage.

As a consumer looking at policies in the most general sense and as a college student just entering the world of work for the first time, I must decide what policy will work best for me. I want term life. Obviously it is the cheapest and all I will need until I decide to settle down. When the time comes to get married and start a family, I am going to want permanent insurance. If by this time I am comfortable with the stock market, I would consider investing in variable universal life. I want a fixed minimum death benefit because I am going to want to know my family will be secure when I am gone. If I do not feel comfortable with the stock market, I will probably choose to invest in limited-premium ordinary life insurance. I like the idea that I will not have to pay any more premiums when I get to retirement age. I think that perhaps endowment insurance would also be helpful in my pursuit to save for retirement. However it is not a popular form of insurance in the United States and there will be other, perhaps better ways to build up a retirement income. Also, term insurance will need to be purchased until the children get out of college and reach financial freedom. I would also like to purchase insurance on the children shortly after each one is born (i.e. juvenile insurance). What is more, I would like all of my insurance needs to be completely paid for by the time I reach retirement age. Will I choose a stock owned or a mutual insurance company? My situation will be different than most because, I will likely still be employed by a publicly traded company and will get life insurance through them. As can be seen, I have a lot of insurance wants, and with all of these wants, my insurance costs are going to be through the roof. Perhaps when the time comes to actually purchase insurance, my wants and needs will have to be reevaluated, only next time, affordability will have to be taken into consideration as well. When I set out to write this paper, I assumed that

finding an appropriate product would be an easy task but now I realize there are so many factors that must be contemplated and have tried my hardest to evaluate them.

How much insurance do I need? There are plenty of calculators available to calculate the amount of insurance one should purchase on the internet. In doing so, these calculators ask for how much income is being made and will continue to be made. How many years you would like your dependents to be covered, the interest rate and the average annual inflation (which, has been about 3% for the past 10 years). In filling out the appropriate fields with my soon to be income, and how many years I will need the coverage for, I calculated how much insurance I will need. I would also initially like term insurance to begin, which is important because it affects the calculator that should be used. Given my current earnings and the amount of time I want the money to last, I would need to purchase insurance for almost $660,000. That is quite a bit of insurance, but if I want my future family to be taken care of after I have passed on, it will probably be needed (1stQuote.com, 2005). It must be kept in the mind that these calculators provide only a very crude estimate so, when actually contemplating buying insurance; a better estimate should be prepared with an advisor. I have just mentioned all of the reasons why I want to buy insurance, but what affects insurance consumption around the world?

Statistical Analysis of Insurance Consumption

Not everyone will have the same wants or needs as I, so what factors really predict the number of insurance policies sold? This question is likely to be old news in the insurance world, all of the factors already known, but to a consumer such as myself this is an uncharted territory. As such, the last portion of this paper will attempt to answer again, a question that has probably already been answered, what factors determine the number of insurance products sold? It has been found that worldwide, there are eight factors that affect life insurance consumption. These

factors are; price, inflation and interest rates, ages of the population, educational attainment, household structure, industrialization, political stability, and most importantly income. These factors actually seem quite reasonable and straightforward (Black & Skipper, 2000). More money equals more to spend on insurance, a lower price equals affordability, an older population would view death as more of a risk than the young, higher education can be positively correlated with both income and the desire for protection, and a family would desire more protection than an individual with no dependents, etc. After looking over this list I wondered, do these factors affect the United States as well? What works for a group does not necessary work for a particular case within the group. With this in mind, I set out to find what factors accounted for the number of insurance policies sold in the United States. Using the latest data I could find from the *2004-2005 Statistical Abstract of the United States* and the *2002 Life Insurers Fact Book,* I attempted to find statistically significant predictors of the number of life insurance products sold in the United States today. My regression analysis started out with ten variables that I considered likely to be related to the number of life insurance policies sold with the exception of one. These factors are: the population of the state over the age of 34, the number of life insurers located within the state, the number of individuals who have health insurance, the number of unemployed persons, the medium household income, the number of people who live below the poverty line, the number marriages, the total death rate (per 100,000 people), the percentage of the state population that graduated from high school, the percentage of the state population that graduated with a bachelors degree or higher, and just for fun I included, the death rate due to homicide (some of which is made up of spouses killing one another for the insurance money I am sure). The more insurers there are in the state, the more life insurance policies that will be sold. Also, it can be reasonable to assume that a state with more people over the age of 34 would

sell more life insurance policies. More total people mean more people to purchase policies. It is my belief that the number of marriages within the state will affect the number of life insurance policies sold as well. It seems reasonable that people, who have gotten married, would be more likely to buy life insurance policies than those who have not.

People who buy health insurance are more likely to buy life insurance as well; therefore a state with a larger number of individuals having health insurance policyholders will also have more individuals with life insurance policies. More money possessed means more money spent on everything, including insurance. States that have a higher medium income would likely sell more life insurance policies because more people can afford to buy them. Opposite this, the more unemployed persons there are within a state could mean a lower number of life insurance policies sold, because the unemployed typically do not posses the resources to finance life insurance policies. This is also true about those who are living below the poverty line; the more individuals within a state living below the poverty line, the less life insurance policies sold. Lastly, it is doubtful that the death rate (the number of people who died of various causes per 100,000 people) or homicide rate (the number of people killed per 100,000 people), will have any affect upon the number of life insurance policies sold, but they will be interesting covariates to explore and so have been included with this data set. I would have liked to include all of the variables that were responsible for life insurance consumption worldwide, but unfortunately all of that data was not available so, I have amply compensated by adding other interesting or relevant variables.

Using the statistical software package, SAS, I analyzed the data and found which variables were statistically significant using various techniques, (see the Appendix). I discovered that out of my ten variables only four are important. Those are: the number of health insurance

policies sold, the number of insurers located within the state, the unemployment rate and the percentage of high school graduates. I had thought for sure that the population over 34 would affect the number of insurance policies sold, but was surprised to find out that it did not. Perhaps in the United States, age does not matter. I was even more surprised to find that income was not a significant predictor of life insurance consumption. According to world data these two factors are important. What could account for this discrepancy? Perhaps, because most Americans live better-off than people in most other countries, income is not as important here as it is in the rest of the world. Curiosity got the best of me so, I decided to run the regression again only this time without including the factors for educational attainment (percentages of who graduated from high school or earned a bachelors degree or higher). Income then became statistically significant. This is quite a notable find and makes one wonder, is educational attainment a stronger of predictor of insurance consumption and consequently makes income an obsolete predictor? In the United States at least, it seems as though educational attainment does make income an irrelevant factor in life insurance consumption. If educational attainment is not taken into consideration, income once again becomes important. Having done my own regression for the United States, I do see some similarities between my findings and those already recorded for the world and some differences as has been already noted. Both I and the previously analyzed data find that educational attainment is an important factor in determining the number of life insurance products sold. However, income may or may not be important and an older population is certainly not important to life insurance consumption in the United States. My regression analysis weakly suggests that some of the factors that affect the world consumption of life insurance do not affect the United States in the same way. Further research should be completed before a definite conclusion can be drawn.

Conclusion

Whether looking at factors that affect the sale of insurance products or the products sold themselves, it is clear, insurance is a complicated and fascinating topic. This paper attempted to investigate insurance from its most general aspects to it most specific. The basic definition of insurance was looked at as well as its history and innovations. Next, a detailed literature review was done on the basic insurance products including but not limited to: term life, whole life, universal life, variable life, and variable universal life. A compare and contrast of specific insurance products sold by two much esteemed companies followed. Along with this compare and contrast, was a future projection of what insurance products I would someday like to buy. This section was completely subjective and must not be used as an authority for it was entirely the author's opinion. The last section included an analysis determining the various factors that affect the number of insurance policies sold specifically in the United States.

Insurance is as suggested before, a commodity everyone wants but few want to pay for. It is complicated and interesting from both an actuarial standpoint and that of a consumer. For the rest of my life, I will be looking at life insurance as an actuary, so for now in this thesis at least I have looked at it only from the perspective of a consumer. Perhaps this thesis was a bit out of sync with the normal thesis. The "project" part being fulfilled not with mathematical equations, analyses, or a discovery on my own, but instead with a thoughtful assessment of the information learned. This paper is both a literature review and an investigation into the self, combining equal parts of who I am, an actuarial student, a clueless future employee of an insurance company, a student of psychology inherently interested in the dynamics of my own life, and a someday consumer. I attempted to investigate the insurance world, not as an actuary, citing no numbers or formulas, but as a consumer, eager to discover what I had once been so ignorant of. This paper

has become the culmination of my research, my personal assessment of the gathered information, and my own work. Now that it is completed, I can only hope that this paper has somehow imparted some of this newly learned knowledge on to others, not as an authority on the topic, but rather as a fellow consumer.

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Appendix

STATES	POLICIES	LIFE INSURERS	INCOME	MARRIAGES	# LIVING BELOW POVERTY	DEATH RATE
AL	6264000	15	36693	42200	64000	1014
AK	193000	0	55426	5100	52000	469.4
AZ	4661000	88	40965	40000	707000	773.7
AR	1736000	37	31798	38400	480000	1030.1
CA	10306000	32	47243	224200	4406000	676.4
CO	1842000	12	50053	36500	415000	638.4
CT	1824000	31	52887	18600	262000	868.4
DE	518000	47	50301	5200	64000	892.8
DC	385000	4	41539	3500	94000	1037.1
FL	7896000	23	38141	151300	1963000	1021.6
GA	5614000	20	42508	51300	997000	767.2
HI	564000	5	49232	24000	127000	684.1
ID	476000	5	38310	14700	153000	738.5
IL	7737000	84	47578	89800	1383000	842.1
IN	3770000	40	41921	34100	525000	900.9
IA	1960000	30	42255	20900	239000	947.9
KS	1607000	12	41097	20300	250000	912.1
KY	2630000	11	37184	36600	525000	979.7
LA	4705000	43	33194	37500	745000	934.1
ME	586000	2	38733	11400	143000	967
MD	3436000	11	55013	37500	391000	813.9
MA	3199000	18	49018	40000	609000	886.6
MI	4736000	27	46929	66500	11015000	863.7
MN	2260000	17	52804	33000	321000	757
MS	1888000	23	33305	18700	490000	988.2
MO	3551000	37	43884	42200	531000	975.3
MT	341000	3	32929	6400	122000	912.9
NE	1074000	29	42518	13600	161000	882.2
NV	572000	2	45493	146100	173000	776.3
NH	631000	3	50866	10600	70000	779.4
NJ	4464000	7	52137	54100	659000	877.8
NM	662000	1	34599	13900	321000	771.7
NY	9211000	96	42157	145500	2653000	834.4
NC	6591000	7	39040	61100	1059000	864.4
ND	317000	4	35830	4100	74000	950.1
OH	7046000	40	42631	82300	1130000	948.5
OK	1627000	30	34554	16600	500000	999.6
OR	1123000	2	42701	26000	386000	868.2
PA	8391000	35	42320	71400	1114000	1054.4
RI	518000	5	44825	8600	107000	945.7
SC	3620000	12	38362	36800	537000	901.3
SD	403000	3	38407	6700	75000	912.9
TN	4441000	18	36542	77700	800000	959.2
TX	10237000	166	40547	194900	3231000	714.9
UT	745000	17	48378	23200	212000	555.7
VT	324000	2	41888	6000	60000	848.5
VA	4497000	14	49085	63400	614000	782
WA	1844000	14	44835	42200	642000	744.9
WV	1146000	1	30342	14200	282000	1164.2
WI	2794000	25	46734	34900	461000	862.5
WY	221000	0	40007	5000	46000	816

STATES	HEALTH	NUMBER OF UNEMPLOYED	HIGH SCHOOL	BACHELORS	POPULATION OVER 34
AL	3876000	125000	82.4	22.3	2395.20
AK	516000	27000	90.2	25.5	357.40
AZ	4526000	151000	84.4	28	2906.70
AR	2252000	78000	79.2	18.8	1428.80
CA	28761000	1177000	81.3	31.7	18889.70
CO	3756000	150000	88.3	35.5	2524.80
CT	3027000	99000	88.8	34.5	1893.50
DE	719000	18000	86.5	26.9	457.10
DC	498000	21000	86.4	45.7	330.10
FL	13586000	420000	85.9	26	8933.80
GA	7072000	207000	85.2	27.6	4757.60
HI	1101000	27000	88	26.6	678.60
ID	1067000	37000	87.9	23.8	717.40
IL	10737000	422000	86.8	27.4	6707.00
IN	5303000	163000	87.2	21.1	3245.40
IA	2626000	72000	89.8	24.3	1538.70
KS	2404000	77000	89.6	30	1412.00
KY	3498000	120000	81.8	21	2245.50
LA	3627000	134000	78.7	22.4	2331.70
ME	1125000	35000	87.1	24.2	736.40
MD	4728000	131000	87.4	35.2	3019.40
MA	5827000	198000	86.9	36.7	3512.30
MI	8752000	368000	87.9	24.4	5348.30
MN	4657000	145000	92.3	32.5	2726.10
MS	2322000	83000	83	20.1	1489.20
MO	4939000	170000	87.9	28.1	3027.30
MT	767000	22000	91.9	25.5	507.70
NE	1530000	39000	91.3	24.8	902.30
NV	1703000	59000	86.3	24.5	1270.20
NH	1141000	31000	90.8	35.4	727.10
NJ	7408000	257000	87.6	34.6	4684.90
NM	1452000	57000	82.9	25.1	988.10
NY	16241000	589000	85.4	36	10350.00
NC	6794000	273000	80.9	23.4	4574.10
ND	564000	14000	89.5	25.2	340.70
OH	9938000	363000	88.1	24.6	6040.30
OK	2876000	96000	85.2	22.9	1827.20
OR	2999000	152000	87.4	25.9	1945.80
PA	10809000	344000	86.5	25.3	6503.30
RI	952000	30000	81.1	27.2	587.90
SC	3497000	136000	83.6	24.9	2236.40
SD	659000	15000	87.5	25.5	398.20
TN	5058000	169000	82.9	24.3	3208.50
TX	15973000	738000	78.3	24.5	11616.90
UT	2000000	67000	91	30.8	1136.70
VT	553000	16000	90.8	34.2	357.00
VA	6156000	154000	88.4	33.1	4070.40
WA	5151000	237000	89.7	29.9	3390.30
WV	1496000	48000	80.9	15.3	995.30
WI	4939000	174000	88.8	25.6	2925.00
WY	402000	13000	91.9	22.5	304.00

The REG Procedure
Model: MODEL1
Dependent Variable: life

Number of Observations Read 51
Number of Observations Used 51

Forward Selection: Step 1

Variable health Entered: R-Square = 0.7997 and C(p) = 34.6705

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	3.272131E14	3.272131E14	195.60	<.0001
Error	49	8.197226E13	1.672903E12		
Corrected Total	50	4.091854E14			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	735006	246911	1.482424E13	8.86	0.0045
health	0.49389	0.03531	3.272131E14	195.60	<.0001

Bounds on condition number: 1, 1

Forward Selection: Step 2

Variable insurers Entered: R-Square = 0.8364 and C(p) = 21.7160

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	3.422229E14	1.711114E14	122.66	<.0001
Error	48	6.696254E13	1.395053E12		
Corrected Total	50	4.091854E14			

The REG Procedure
Model: MODEL1
Dependent Variable: life

Forward Selection: Step 2

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	539024	233258	7.449607E12	5.34	0.0252
insurers	21889	6673.06601	1.500971E13	10.76	0.0019
health	0.42585	0.03834	1.720748E14	123.35	<.0001

Bounds on condition number: 1.4137, 5.6549

Forward Selection: Step 3

Variable unemployed Entered: R-Square = 0.8725 and C(p) = 8.9967

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	3.569966E14	1.189989E14	107.17	<.0001
Error	47	5.21888E13	1.1104E12		
Corrected Total	50	4.091854E14			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	205486	227308	9.074368E11	0.82	0.3706
insurers	27312	6136.33112	2.199734E13	19.81	<.0001
health	1.06765	0.17925	3.939425E13	35.48	<.0001
unemployed	-16.58660	4.54728	1.477375E13	13.30	0.0007

Bounds on condition number: 40.454, 242.31

Forward Selection: Step 4

Variable highschool Entered: R-Square = 0.8961 and C(p) = 1.3593

The REG Procedure
Model: MODEL1
Dependent Variable: life

Forward Selection: Step 4

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	3.666696E14	9.166739E13	99.18	<.0001
Error	46	4.251585E13	9.242577E11		
Corrected Total	50	4.091854E14			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	11856750	3607522	9.984043E12	10.80	0.0019
insurers	24104	5685.57143	1.661197E13	17.97	0.0001
health	1.13890	0.16501	4.402897E13	47.64	<.0001
unemployed	-18.87220	4.20839	1.858683E13	20.11	<.0001
highschool	-133256	41191	9.672946E12	10.47	0.0023

Bounds on condition number: 41.628, 335.58

No other variable met the 0.1500 significance level for entry into the model.

Summary of Forward Selection

Step	Variable Entered	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	health	1	0.7997	0.7997	34.6705	195.60	<.0001
2	insurers	2	0.0367	0.8364	21.7160	10.76	0.0019
3	unemployed	3	0.0361	0.8725	8.9967	13.30	0.0007
4	highschool	4	0.0236	0.8961	1.3593	10.47	0.0023

The REG Procedure
Model: MODEL1
Dependent Variable: life

Number of Observations Read 51
Number of Observations Used 51

Backward Elimination: Step 0

All Variables Entered: R-Square = 0.9043 and C(p) = 12.0000

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	3.700413E14	3.364012E13	33.52	<.0001
Error	39	3.914411E13	1.003695E12		
Corrected Total	50	4.091854E14			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	10504258	6274200	2.813298E12	2.80	0.1021
insurers	21503	6395.15679	1.134759E13	11.31	0.0017
income	8.76874	38.44058	52227125236	0.05	0.8208
homicide	40393	39166	1.067531E12	1.06	0.3087
marriages	-4.08365	7.15356	3.270802E11	0.33	0.5714
poverty	0.02165	0.11225	37341839707	0.04	0.8481
death	-210.50541	1741.76066	14660587166	0.01	0.9044
health	1.23895	0.24671	2.531237E13	25.22	<.0001
unemployed	-17.35426	5.16480	1.1332E13	11.29	0.0018
bachelors	-55198	44181	1.5667E12	1.56	0.2190
highschool	-103739	64660	2.583491E12	2.57	0.1167
overthirtyfour	-217.07622	252.63838	7.410161E11	0.74	0.3955

Bounds on condition number: 81.349, 2066.6

Backward Elimination: Step 1

Variable death Removed: R-Square = 0.9043 and C(p) = 10.0146

The REG Procedure
Model: MODEL1
Dependent Variable: life

Backward Elimination: Step 1

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	10	3.700266E14	3.700266E13	37.80	<.0001
Error	40	3.915877E13	9.789692E11		
Corrected Total	50	4.091854E14			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	10039157	4893978	4.119453E12	4.21	0.0468
insurers	21596	6270.36042	1.161241E13	11.86	0.0014
income	11.21168	32.29179	1.180121E11	0.12	0.7303
homicide	40304	38674	1.063234E12	1.09	0.3036
marriages	-3.83107	6.75669	3.147328E11	0.32	0.5739
poverty	0.02015	0.11018	32755229827	0.03	0.8558
health	1.22203	0.20061	3.63265E13	37.11	<.0001
unemployed	-17.13119	4.76394	1.265935E13	12.93	0.0009
bachelors	-55380	43608	1.578913E12	1.61	0.2114
highschool	-101689	61622	2.66586E12	2.72	0.1067
overthirtyfour	-204.63448	227.85335	7.896158E11	0.81	0.3745

Bounds on condition number: 55.146, 1458.8

Backward Elimination: Step 2

Variable poverty Removed: R-Square = 0.9042 and C(p) = 8.0472

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	3.699939E14	4.111043E13	43.01	<.0001
Error	41	3.919152E13	9.558908E11		
Corrected Total	50	4.091854E14			

The REG Procedure
Model: MODEL1
Dependent Variable: life

Backward Elimination: Step 2

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	9909194	4784713	4.099898E12	4.29	0.0447
insurers	21511	6179.01266	1.158476E13	12.12	0.0012
income	11.95876	31.65265	1.364459E11	0.14	0.7075
homicide	41745	37415	1.189922E12	1.24	0.2710
marriages	-3.93342	6.65364	3.340651E11	0.35	0.5577
health	1.21801	0.19704	3.65258E13	38.21	<.0001
unemployed	-16.86872	4.48884	1.349908E13	14.12	0.0005
bachelors	-57526	41502	1.836512E12	1.92	0.1732
highschool	-99931	60147	2.638665E12	2.76	0.1043
overthirtyfour	-206.92767	224.81054	8.09864E11	0.85	0.3627

Bounds on condition number: 54.485, 1245.6

Backward Elimination: Step 3

Variable income Removed: R-Square = 0.9039 and C(p) = 6.1832

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	3.698574E14	4.623218E13	49.37	<.0001
Error	42	3.932797E13	9.363802E11		
Corrected Total	50	4.091854E14			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	9734933	4713577	3.994082E12	4.27	0.0451
insurers	21614	6109.70111	1.171841E13	12.51	0.0010
homicide	38465	36020	1.067764E12	1.14	0.2917
marriages	-3.73293	6.56441	3.028035E11	0.32	0.5726
health	1.21755	0.19502	3.649965E13	38.98	<.0001
unemployed	-16.82854	4.44155	1.344239E13	14.36	0.0005
bachelors	-49304	34976	1.860672E12	1.99	0.1660
highschool	-94520	57817	2.502541E12	2.67	0.1096
overthirtyfour	-208.16400	222.48085	8.19744E11	0.88	0.3548

The REG Procedure
Model: MODEL1
Dependent Variable: life

Backward Elimination: Step 3

Bounds on condition number: 54.483, 1081.9

Backward Elimination: Step 4

Variable marriages Removed: R-Square = 0.9031 and C(p) = 4.4849

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	3.695546E14	5.279352E13	57.28	<.0001
Error	43	3.963077E13	9.216459E11		
Corrected Total	50	4.091854E14			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	9247009	4598216	3.727245E12	4.04	0.0506
insurers	21407	6050.69340	1.15361E13	12.52	0.0010
homicide	38418	35736	1.065189E12	1.16	0.2883
health	1.18580	0.18537	3.771304E13	40.92	<.0001
unemployed	-17.09887	4.38115	1.403856E13	15.23	0.0003
bachelors	-47955	34620	1.768385E12	1.92	0.1731
highschool	-89738	56751	2.304498E12	2.50	0.1211
overthirtyfour	-184.12325	216.70193	6.653587E11	0.72	0.4002

Bounds on condition number: 50.015, 867.77

Backward Elimination: Step 5

Variable overthirtyfour Removed: R-Square = 0.9015 and C(p) = 3.1478

The REG Procedure
Model: MODEL1
Dependent Variable: life

Backward Elimination: Step 5

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	3.688893E14	6.148155E13	67.13	<.0001
Error	44	4.029613E13	9.158212E11		
Corrected Total	50	4.091854E14			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	8050326	4363352	3.117433E12	3.40	0.0718
insurers	23082	5702.54663	1.500388E13	16.38	0.0002
homicide	45553	34625	1.58515E12	1.73	0.1951
health	1.11719	0.16633	4.131482E13	45.11	<.0001
unemployed	-17.93006	4.25702	1.62466E13	17.74	0.0001
bachelors	-49960	34430	1.928309E12	2.11	0.1539
highschool	-77123	54601	1.827188E12	2.00	0.1648

Bounds on condition number: 42.988, 545.8

Backward Elimination: Step 6

Variable homicide Removed: R-Square = 0.8976 and C(p) = 2.7271

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	3.673041E14	7.346082E13	78.93	<.0001
Error	45	4.188128E13	9.306952E11		
Corrected Total	50	4.091854E14			

The REG Procedure
Model: MODEL1
Dependent Variable: life

Backward Elimination: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	11054778	3748086	8.096332E12	8.70	0.0050
insurers	23980	5707.31814	1.642987E13	17.65	0.0001
health	1.14829	0.16598	4.454802E13	47.87	<.0001
unemployed	-18.92297	4.22347	1.8683E13	20.07	<.0001
bachelors	-23058	27924	6.345701E11	0.68	0.4133
highschool	-117087	45738	6.099192E12	6.55	0.0139

Bounds on condition number: 41.637, 428.2

Backward Elimination: Step 7

Variable bachelors Removed: R-Square = 0.8961 and C(p) = 1.3593

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	3.666696E14	9.166739E13	99.18	<.0001
Error	46	4.251585E13	9.242577E11		
Corrected Total	50	4.091854E14			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	11856750	3607522	9.984043E12	10.80	0.0019
insurers	24104	5685.57143	1.661197E13	17.97	0.0001
health	1.13890	0.16501	4.402897E13	47.64	<.0001
unemployed	-18.87220	4.20839	1.858683E13	20.11	<.0001
highschool	-133256	41191	9.672946E12	10.47	0.0023

Bounds on condition number: 41.628, 335.58

All variables left in the model are significant at the 0.1500 level.

The REG Procedure
Model: MODEL1
Dependent Variable: life

Summary of Backward Elimination

Step	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	death	10	0.0000	0.9043	10.0146	0.01	0.9044
2	poverty	9	0.0001	0.9042	8.0472	0.03	0.8558
3	income	8	0.0003	0.9039	6.1832	0.14	0.7075
4	marriages	7	0.0007	0.9031	4.4849	0.32	0.5726
5	overthirtyfour	6	0.0016	0.9015	3.1478	0.72	0.4002
6	homicide	5	0.0039	0.8976	2.7271	1.73	0.1951
7	bachelors	4	0.0016	0.8961	1.3593	0.68	0.4133

The REG Procedure
Model: MODEL1
Dependent Variable: life

Number of Observations Read	51
Number of Observations Used	51

Stepwise Selection: Step 1

Variable health Entered: R-Square = 0.7997 and C(p) = 34.6705

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	3.272131E14	3.272131E14	195.60	<.0001
Error	49	8.197226E13	1.672903E12		
Corrected Total	50	4.091854E14			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	735006	246911	1.482424E13	8.86	0.0045
health	0.49389	0.03531	3.272131E14	195.60	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable insurers Entered: R-Square = 0.8364 and C(p) = 21.7160

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	3.422229E14	1.711114E14	122.66	<.0001
Error	48	6.696254E13	1.395053E12		
Corrected Total	50	4.091854E14			

The REG Procedure
Model: MODEL1
Dependent Variable: life

Stepwise Selection: Step 4

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	3.666696E14	9.166739E13	99.18	<.0001
Error	46	4.251585E13	9.242577E11		
Corrected Total	50	4.091854E14			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	11856750	3607522	9.984043E12	10.80	0.0019
insurers	24104	5685.57143	1.661197E13	17.97	0.0001
health	1.13890	0.16501	4.402897E13	47.64	<.0001
unemployed	-18.87220	4.20839	1.858683E13	20.11	<.0001
highschool	-133256	41191	9.672946E12	10.47	0.0023

Bounds on condition number: 41.628, 335.58

All variables left in the model are significant at the 0.1500 level.

No other variable met the 0.1500 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value
1	health		1	0.7997	0.7997	34.6705	195.60
2	insurers		2	0.0367	0.8364	21.7160	10.76
3	unemployed		3	0.0361	0.8725	8.9967	13.30
4	highschool		4	0.0236	0.8961	1.3593	10.47

Summary of Stepwise Selection

Step	Pr > F
1	<.0001
2	0.0019
3	0.0007

The REG Procedure
Model: MODEL1
Dependent Variable: life

Summary of Stepwise Selection

Step	Pr > F
4	0.0023

The REG Procedure
Model: MODEL1
Dependent Variable: life

Number of Observations Read	51
Number of Observations Used	51

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	3.700413E14	3.364012E13	33.52	<.0001
Error	39	3.914411E13	1.003695E12		
Corrected Total	50	4.091854E14			

Root MSE	1001846	R-Square	0.9043
Dependent Mean	3082039	Adj R-Sq	0.8774
Coeff Var	32.50594		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	10504258	6274200	1.67	0.1021
insurers	1	21503	6395.15679	3.36	0.0017
income	1	8.76874	38.44058	0.23	0.8208
homicide	1	40393	39166	1.03	0.3087
marriages	1	-4.08365	7.15356	-0.57	0.5714
poverty	1	0.02165	0.11225	0.19	0.8481
death	1	-210.50541	1741.76066	-0.12	0.9044
health	1	1.23895	0.24671	5.02	<.0001
unemployed	1	-17.35426	5.16480	-3.36	0.0018
bachelors	1	-55198	44181	-1.25	0.2190
highschool	1	-103739	64660	-1.60	0.1167
overthirtyfour	1	-217.07622	252.63838	-0.86	0.3955

The REG Procedure
Model: MODEL1
Dependent Variable: life

Number of Observations Read 51
Number of Observations Used 51

Forward Selection: Step 1

Variable health Entered: R-Square = 0.7997 and C(p) = 26.3173

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	3.272131E14	3.272131E14	195.60	<.0001
Error	49	8.197226E13	1.672903E12		
Corrected Total	50	4.091854E14			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	735006	246911	1.482424E13	8.86	0.0045
health	0.49389	0.03531	3.272131E14	195.60	<.0001

Bounds on condition number: 1, 1

Forward Selection: Step 2

Variable insurers Entered: R-Square = 0.8364 and C(p) = 14.8924

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	3.422229E14	1.711114E14	122.66	<.0001
Error	48	6.696254E13	1.395053E12		
Corrected Total	50	4.091854E14			

The REG Procedure
Model: MODEL1
Dependent Variable: life

Forward Selection: Step 2

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	539024	233258	7.449607E12	5.34	0.0252
insurers	21889	6673.06601	1.500971E13	10.76	0.0019
health	0.42585	0.03834	1.720748E14	123.35	<.0001

Bounds on condition number: 1.4137, 5.6549

Forward Selection: Step 3

Variable unemployed Entered: R-Square = 0.8725 and C(p) = 3.6785

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	3.569966E14	1.189989E14	107.17	<.0001
Error	47	5.21888E13	1.1104E12		
Corrected Total	50	4.091854E14			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	205486	227308	9.074368E11	0.82	0.3706
insurers	27312	6136.33112	2.199734E13	19.81	<.0001
health	1.06765	0.17925	3.939425E13	35.48	<.0001
unemployed	-16.58660	4.54728	1.477375E13	13.30	0.0007

Bounds on condition number: 40.454, 242.31

Forward Selection: Step 4

Variable income Entered: R-Square = 0.8824 and C(p) = 2.0457

The REG Procedure
Model: MODEL1
Dependent Variable: life

Forward Selection: Step 4

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	3.610582E14	9.026455E13	86.27	<.0001
Error	46	4.812719E13	1.046243E12		
Corrected Total	50	4.091854E14			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2125469	999129	4.734772E12	4.53	0.0388
insurers	26315	5977.88376	2.027403E13	19.38	<.0001
income	-45.81178	23.25116	4.061607E12	3.88	0.0548
health	1.09584	0.17458	4.122325E13	39.40	<.0001
unemployed	-17.02899	4.41967	1.553215E13	14.85	0.0004

Bounds on condition number: 40.559, 328.72

No other variable met the 0.1500 significance level for entry into the model.

Summary of Forward Selection

Step	Variable Entered	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	health	1	0.7997	0.7997	26.3173	195.60	<.0001
2	insurers	2	0.0367	0.8364	14.8924	10.76	0.0019
3	unemployed	3	0.0361	0.8725	3.6785	13.30	0.0007
4	income	4	0.0099	0.8824	2.0457	3.88	0.0548

The REG Procedure
Model: MODEL1
Dependent Variable: life

Number of Observations Read 51
Number of Observations Used 51

Backward Elimination: Step 0

All Variables Entered: R-Square = 0.8880 and C(p) = 10.0000

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	3.633454E14	4.037172E13	36.11	<.0001
Error	41	4.583997E13	1.118048E12		
Corrected Total	50	4.091854E14			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	839525	2795143	1.008602E11	0.09	0.7654
insurers	24975	6597.80267	1.602091E13	14.33	0.0005
income	-34.61744	34.42231	1.13076E12	1.01	0.3205
homicide	32599	30258	1.297759E12	1.16	0.2876
marriages	1.20285	7.22781	30965166833	0.03	0.8686
poverty	0.03928	0.11364	1.335576E11	0.12	0.7314
death	778.42093	1768.89720	2.165132E11	0.19	0.6622
health	1.04826	0.24055	2.123257E13	18.99	<.0001
unemployed	-15.79068	5.27671	1.001233E13	8.96	0.0047
overthirtyfour	-36.52160	250.21311	23819901619	0.02	0.8847

Bounds on condition number: 69.424, 1447.4

Backward Elimination: Step 1

Variable overthirtyfour Removed: R-Square = 0.8879 and C(p) = 8.0213

The REG Procedure
Model: MODEL1
Dependent Variable: life

Backward Elimination: Step 1

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	3.633216E14	4.54152E13	41.59	<.0001
Error	42	4.586379E13	1.091995E12		
Corrected Total	50	4.091854E14			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	663387	2491683	77405090309	0.07	0.7914
insurers	25257	6236.11155	1.79121E13	16.40	0.0002
income	-32.85591	31.85958	1.161362E12	1.06	0.3083
homicide	33025	29764	1.344398E12	1.23	0.2735
marriages	1.43649	6.96573	46440180090	0.04	0.8376
poverty	0.04011	0.11217	1.396479E11	0.13	0.7224
death	868.04065	1639.47588	3.061193E11	0.28	0.5993
health	1.03041	0.20471	2.76681E13	25.34	<.0001
unemployed	-15.90989	5.15202	1.041355E13	9.54	0.0036

Bounds on condition number: 52.805, 942.01

Backward Elimination: Step 2

Variable marriages Removed: R-Square = 0.8878 and C(p) = 6.0628

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	3.632752E14	5.189645E13	48.61	<.0001
Error	43	4.591023E13	1.06768E12		
Corrected Total	50	4.091854E14			

The REG Procedure
Model: MODEL1
Dependent Variable: life

Backward Elimination: Step 2

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	769012	2411172	1.086052E11	0.10	0.7513
insurers	25453	6094.08401	1.862516E13	17.44	0.0001
income	-34.01329	31.01024	1.284482E12	1.20	0.2788
homicide	33581	29310	1.401531E12	1.31	0.2582
poverty	0.03933	0.11085	1.344201E11	0.13	0.7245
death	807.09883	1594.56777	2.735322E11	0.26	0.6153
health	1.04102	0.19591	3.01463E13	28.24	<.0001
unemployed	-15.88885	5.09334	1.039011E13	9.73	0.0032

Bounds on condition number: 52.785, 763.39

Backward Elimination: Step 3

Variable poverty Removed: R-Square = 0.8875 and C(p) = 4.1831

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	3.631408E14	6.052346E13	57.84	<.0001
Error	44	4.604465E13	1.046469E12		
Corrected Total	50	4.091854E14			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	671174	2371441	83824701087	0.08	0.7785
insurers	25349	6026.24698	1.851601E13	17.69	0.0001
income	-32.91375	30.54700	1.21491E12	1.16	0.2871
homicide	33731	29014	1.414388E12	1.35	0.2513
death	874.20013	1567.50803	3.254833E11	0.31	0.5799
health	1.02842	0.19074	3.042051E13	29.07	<.0001
unemployed	-15.38135	4.83960	1.057053E13	10.10	0.0027

Bounds on condition number: 48.622, 609.9

Backward Elimination: Step 4

The REG Procedure
Model: MODEL1
Dependent Variable: life

Backward Elimination: Step 4

Variable death Removed: R-Square = 0.8867 and C(p) = 2.4742

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	3.628153E14	7.256305E13	70.42	<.0001
Error	45	4.637013E13	1.030447E12		
Corrected Total	50	4.091854E14			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1865351	1011369	3.505318E12	3.40	0.0717
insurers	25335	5979.88410	1.849574E13	17.95	0.0001
income	-43.93141	23.11986	3.720538E12	3.61	0.0638
homicide	36878	28241	1.757059E12	1.71	0.1983
health	1.06976	0.17440	3.876905E13	37.62	<.0001
unemployed	-16.45205	4.40837	1.43519E13	13.93	0.0005

Bounds on condition number: 40.971, 420.96

Backward Elimination: Step 5

Variable homicide Removed: R-Square = 0.8824 and C(p) = 2.0457

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	3.610582E14	9.026455E13	86.27	<.0001
Error	46	4.812719E13	1.046243E12		
Corrected Total	50	4.091854E14			

The REG Procedure
Model: MODEL1
Dependent Variable: life

Backward Elimination: Step 5

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2125469	999129	4.734772E12	4.53	0.0388
insurers	26315	5977.88376	2.027403E13	19.38	<.0001
income	-45.81178	23.25116	4.061607E12	3.88	0.0548
health	1.09584	0.17458	4.122325E13	39.40	<.0001
unemployed	-17.02899	4.41967	1.553215E13	14.85	0.0004

Bounds on condition number: 40.559, 328.72

All variables left in the model are significant at the 0.1500 level.

Summary of Backward Elimination

Step	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	overthirtyfour	8	0.0001	0.8879	8.0213	0.02	0.8847
2	marriages	7	0.0001	0.8878	6.0628	0.04	0.8376
3	poverty	6	0.0003	0.8875	4.1831	0.13	0.7245
4	death	5	0.0008	0.8867	2.4742	0.31	0.5799
5	homicide	4	0.0043	0.8824	2.0457	1.71	0.1983

The REG Procedure
Model: MODEL1
Dependent Variable: life

Number of Observations Read	51
Number of Observations Used	51

Stepwise Selection: Step 1

Variable health Entered: R-Square = 0.7997 and C(p) = 26.3173

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	3.272131E14	3.272131E14	195.60	<.0001
Error	49	8.197226E13	1.672903E12		
Corrected Total	50	4.091854E14			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	735006	246911	1.482424E13	8.86	0.0045
health	0.49389	0.03531	3.272131E14	195.60	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable insurers Entered: R-Square = 0.8364 and C(p) = 14.8924

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	3.422229E14	1.711114E14	122.66	<.0001
Error	48	6.696254E13	1.395053E12		
Corrected Total	50	4.091854E14			

The REG Procedure
Model: MODEL1
Dependent Variable: life

Stepwise Selection: Step 2

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	539024	233258	7.449607E12	5.34	0.0252
insurers	21889	6673.06601	1.500971E13	10.76	0.0019
health	0.42585	0.03834	1.720748E14	123.35	<.0001

Bounds on condition number: 1.4137, 5.6549

Stepwise Selection: Step 3

Variable unemployed Entered: R-Square = 0.8725 and C(p) = 3.6785

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	3.569966E14	1.189989E14	107.17	<.0001
Error	47	5.21888E13	1.1104E12		
Corrected Total	50	4.091854E14			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	205486	227308	9.074368E11	0.82	0.3706
insurers	27312	6136.33112	2.199734E13	19.81	<.0001
health	1.06765	0.17925	3.939425E13	35.48	<.0001
unemployed	-16.58660	4.54728	1.477375E13	13.30	0.0007

Bounds on condition number: 40.454, 242.31

Stepwise Selection: Step 4

Variable income Entered: R-Square = 0.8824 and C(p) = 2.0457

The REG Procedure
Model: MODEL1
Dependent Variable: life

Stepwise Selection: Step 4

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	3.610582E14	9.026455E13	86.27	<.0001
Error	46	4.812719E13	1.046243E12		
Corrected Total	50	4.091854E14			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2125469	999129	4.734772E12	4.53	0.0388
insurers	26315	5977.88376	2.027403E13	19.38	<.0001
income	-45.81178	23.25116	4.061607E12	3.88	0.0548
health	1.09584	0.17458	4.122325E13	39.40	<.0001
unemployed	-17.02899	4.41967	1.553215E13	14.85	0.0004

Bounds on condition number: 40.559, 328.72

All variables left in the model are significant at the 0.1500 level.

No other variable met the 0.1500 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value
1	health		1	0.7997	0.7997	26.3173	195.60
2	insurers		2	0.0367	0.8364	14.8924	10.76
3	unemployed		3	0.0361	0.8725	3.6785	13.30
4	income		4	0.0099	0.8824	2.0457	3.88

Summary of Stepwise Selection

Step	Pr > F
1	<.0001
2	0.0019
3	0.0007

The REG Procedure
Model: MODEL1
Dependent Variable: life

Summary of Stepwise Selection

Step	Pr > F
4	0.0548

The REG Procedure
Model: MODEL1
Dependent Variable: life

Number of Observations Read 51
Number of Observations Used 51

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	3.633454E14	4.037172E13	36.11	<.0001
Error	41	4.583997E13	1.118048E12		
Corrected Total	50	4.091854E14			

Root MSE	1057378	R-Square	0.8880
Dependent Mean	3082039	Adj R-Sq	0.8634
Coeff Var	34.30774		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	839525	2795143	0.30	0.7654
insurers	1	24975	6597.80267	3.79	0.0005
income	1	-34.61744	34.42231	-1.01	0.3205
homicide	1	32599	30258	1.08	0.2876
marriages	1	1.20285	7.22781	0.17	0.8686
poverty	1	0.03928	0.11364	0.35	0.7314
death	1	778.42093	1768.89720	0.44	0.6622
health	1	1.04826	0.24055	4.36	<.0001
unemployed	1	-15.79068	5.27671	-2.99	0.0047
overthirtyfour	1	-36.52160	250.21311	-0.15	0.8847