Heterogeneity of Hazard Rates in Insurance.
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Citation for published version (APA):

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Chapter 1

Introduction

1.1 Motivation

In the title index, three themes are combined. Generally stated, a
hazard rate is the probability of a certain event at some point of time, conditionally
given what has happened prior to that time. As the description shows, there is always
a one-dimensional score dealing with hazard rates. An elementary example of a hazard
rate is linked to uncertainty life-contingencies: the probability of dying in a certain
year can usually only survive until the beginning of that year. A hazard rate can be
applied to a number of as an hour end of a Figure 1.2.

We also consider the theme of heterogeneity. This means that we take into account the
fact that the hazard rates in similar groups are not the same. For example, men
and women have the same probability to survive the ages 50-60 years, but are
not necessarily endowed with the same employment history, have the same chance to
find a job within the same time.

The second theme, namely, embraces the first three areas of the last example: death,
which has to be provided for in future. For this reason, insurance policies and potentially
insured individuals should try to score their contributions are affected in the
insurance to which all three
so-called risk-variables are considered. Hazard rate models based on hazard rates were
and could find many applications in several fields even as reliability theory. We model
therefore. We may say in an aggregate, but not so many in particular in mathematics
and insurance examples.

The insurance model is largely based on the hazard rate approach. Since life
insurers mainly consider survival years and there are always probabilistically applying for
the probability to die is an hazard disabled. On the other hand in the very process,
the heterogeneity aspects play a very minor role. Instead, the traditional approach is
still of the actuary, i.e., for an individual person, when they are identical with respect to the
insurance factors applied (e.g., those are restricted to age, gender, state of
health and sometimes economic status), and let their life history, represent identical risks.
In other words, differences in risk profiles between individuals allocated to the same risk
classes are ignored. An exception is Nunnyn (1968), discussing experience-rating in group