

## 論文の内容の要旨

論文題目 **Economic Analysis of Suicide Problem**  
(自殺問題の経済学的分析)  
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This dissertation is organized as follows.

Chapter 1 is the introduction of suicide study in Economics and in the related field.

In Chapter 2, we review economic theories and empirical studies on the socioeconomic aspects of suicide. Through our survey, we would like to emphasize the importance of studying suicide by employing a “rational” approach that complements the medical perspective on suicide. We first introduce major economic theories of suicide and then present a summary of a variety of empirical studies from the socioeconomic perspective. To shed light on the mixed empirical evidence, we employ a systematic and structured analysis using a meta-regression method to investigate how the existing empirical results vary. We have identified a publication bias, not highlighted previously, in the existing literature with respect to several commonly employed socioeconomic factors. Several characteristics of existing studies have been identified as influencing the qualitative outcome. We then discuss the recent developments in economic studies on suicide, on the basis of the authors’ ongoing project on suicide. In the concluding section, we point out some issues for further studies.

Chapter 3 investigates the abrupt increase in the number of suicides in Japan in 1998 and the subsequent persistence of suicide thereafter; it does so by undertaking data

decompositions in terms of demographic factors, reasons for suicide, employment status, and access to the means of committing suicide. The decomposition results regarding the growth in the Japanese suicide rate from 1997 to 1998 show that a large proportion of the abrupt increase in the number of suicides can be attributed to middle-aged men with financial problems, and that the self-employed subset of the population contributed significantly to growth in the suicide rate. Meanwhile, persistently high suicide rates since 1998 can be largely attributed to the younger generation (i.e., those aged 20–39). In accordance with the decomposition results, prefecture-level panel data regression established a correlation between suicide and economic hardship. In particular, the unemployment rate and the individual bankruptcy rate were found to be positively associated with the suicide rates of all males, males aged 20–39, and males aged 40–59, while individual bankruptcy was found to affect middle-aged males more than younger males.

Chapter 4 discusses the relationship between unemployment and suicide. Unemployment is regarded as one of the most serious problems in modern Japan. Although there have been several studies on the determinants of Japanese unemployment, only a few have investigated the costs of unemployment. Indeed, there is a strong positive correlation between the unemployment rate and the suicide rate in Japan, suggesting that the lack of social safety nets against unemployment has a horrific outcome. In this chapter, we discuss three aspects of Japanese suicide and unemployment. First, we discuss the abrupt “jump” in the number of suicide cases in Japan in 1998 and the subsequent “persistence” and “juvenization” of this figure. Second, we discuss how suicide in Japan is different from suicide in other Organisation for Economic Co-operation and Development (OECD) countries, showing that the Japanese suicide rate is very sensitive to the unemployment rate. Third, we employ Japanese prefecture-level panel data to verify the positive correlation between suicide and unemployment rates. After the discussion on these three aspects, we consider possible suicide prevention policies in Japan.

Lastly, Chapter 5 contributes to the literature of suicide studies by presenting procedures and its estimates of the number of family members who lose their loved ones to suicide. Using Japanese aggregate level data, three main findings emerge: first, there are approximately five bereaved family members per suicide; second, in 2006, there were about 90,000 children who had lost a parent to suicide; and third, in 2006,

there were about three million living family members who had lost a loved one to suicide. The direct production loss of bereaved family members in 2006 alone is estimated at approximately 197 million USD. These results are valuable in evaluating the cost-effectiveness of suicide prevention programs and in designing appropriate policy instruments.