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Government economic policy and death

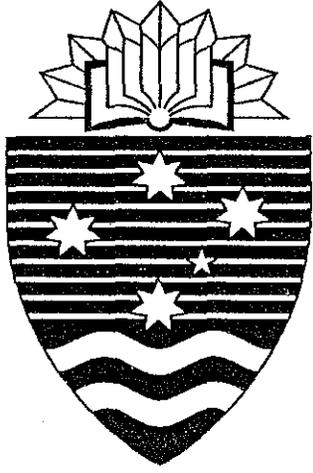
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"Government Economic Policy and Death"

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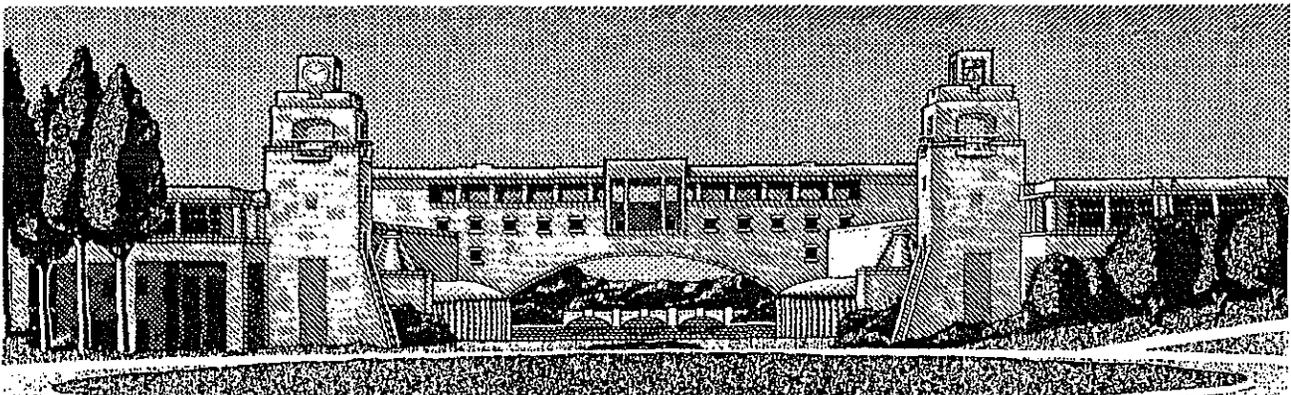
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B O N D U N I V E R S I T Y

GOVERNMENT ECONOMIC POLICY AND DEATH

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GOVERNMENT ECONOMIC POLICY AND DEATH

ABSTRACT

National macroeconomic policy decisions have a substantial effect on the health status of a nation's population. Research in both industrialized and newly industrialized countries have shown a lagged positive relationship between the unemployment rate (an indicator of recession) and mortality due to several causes, particularly cardiovascular diseases. That relationship has been found at the national, regional, and individual level. However, the relationship has not been fully appreciated by policymakers, and those social costs have traditionally not been measured by economists. This paper reviews some of the major studies that have demonstrated the unemployment/mortality relationship. Policymakers in industrializing nations need to consider this fundamental relationship between unemployment and mortality as they design and implement national development strategies.

INTRODUCTION

The idea that external economic forces can effect a population's health has been the subject of research for nearly a century. In 1897, Emile Durkheim the renowned sociologist published his classic study of suicide in which he argued for and documented the importance of social environment. Durkheim argued that suicide was not an individual act, but, rather, suicide rates were social phenomenon and varied depending on social environment. The level of social integration was a major determinant of the suicide rate for a population and a lack of social regulation of the individual by society would increase anomic suicide, he theorized.

According to Durkheim, acute anomie (normlessness) occurs when sudden changes place individuals in circumstances where the norms that

previously regulated their lives are no longer appropriate to their changed situation. Rapid economic change, both negative and positive can cause anomie. The social equilibrium is disturbed and society is for a time incapable of exerting its regulating influence resulting in an increase in suicide rates. For many years, suicide was the only cause of death that occasional research efforts linked to economic change.

During the 1970's, there was a renewal of research interest in the relationship between economic change and the health status of a population. Subsequent research results have demonstrated that there is an inverse relationship between long-term economic growth and mortality rates, as well as a direct relationship between economic instability, as measured by the unemployment rate, and mortality [Brenner, 1976; Brenner, 1979; Brenner, 1984]. Those results have been documented in a number of western industrialized nations [Bunn, 1979; Cook et al, 1982; Gordus and McAlinden, 1984; Brenner, 1987a; Brenner, 1987b] and one newly industrialized country [Hauquitz, 1989].

The theoretical basis for research in the area of economic change and health is drawn primarily from sociological and psychological research traditions. The sociological tradition is the oldest and it emphasizes the social disorientation and social distress that occurs when social institutions and society experience change. The psychological tradition emphasizes individual outcomes associated with social change. Psychophysiological and psychosocial research provide the bridge between social change and individual outcomes by identifying plausible mechanisms. The stress model makes the link between unemployment and pathology. No single theory has emerged to satisfactorily explain the complex processes underlying connections between the economy and physical and mental pathology. Instead, researchers have drawn theories from several disciplines and empirically tested their applicability to this area of research.

Macroeconomic policy and unemployment

In order to understand how government economic policies affect health status, the intent and mechanisms of the policies must be understood.

Macroeconomic policy is controlled by the national government and consists of both monetary and fiscal approaches. Monetary policy instruments include changes in the supply of money, changes in the interest rate, and control over the banking system. The instruments of fiscal policy are tax rates and government spending. Macroeconomic policies (both monetary and fiscal) are employed to moderate fluctuations in the economy (business cycles), in particular fluctuation in the rates of growth, unemployment, and inflation. Traditional economic theory assumes an inverse relationship between interest rates and economic growth, inflation, and unemployment [Dornbusch, 1984]. If the economy grows too fast unemployment is low but inflation rates begin to rise. An increase in the interest rates can decrease the rate of economic growth and inflation, but at the cost of increasing unemployment. Increased government expenditures can reduce the unemployment rate and increase economic growth but may increase the inflation rate. The mix of monetary and fiscal policies used by a government depends on political ideology and the assessment of the relative costs of various policy options.

Historically, long-term economic growth is accompanied by economic instabilities (recessions). In times of recession, there is a decline in the average level of real income, and an increase in income inequality due to high levels of unemployment; both of these have negative implications for the population's health status. The health of the lowest socioeconomic groups is affected most because they suffer both absolute and relative declines in income when compared to the majority of the population. During the post-war period, national governments have routinely employed macroeconomic tools to dampen the deviations from the trend of long-term economic growth.

Government intervention can improve (or worsen) the performance of an economy. In the post-war period recessions in Western economies have generally been the consequence of conscious policy decisions and their frequency has also been decided by policy. For example, all the recessions experienced in the United States economy since 1961 have been deliberately engineered to stop inflation [Tobin, 1986], and the United States has experienced nine recessions in the post-war period while Japan has had two [Tobin, 1986].

Economists and policymakers have been concerned by high levels of unemployment because of its potential to damage economic growth and cause social unrest. In general, the consequences due to unemployment for a nation's health status has been ignored. In the short- to medium-term (10-5 years) recession brings about a cluster of some of the most severe stresses that are common in modern society--income loss, occupational failure, status loss, and finally, forced downward social mobility. The key health problems thought to result from such stresses are: psychological illness (e.g. aggression, depression, suicide), cardiovascular problems, suppression of the immune system, and accidents (due to a lack of concentration) [Henry, 1982, Rabkin,1982, Solomon, 1987, Rozanski, 1988].

THE UNEMPLOYMENT - MORTALITY RELATIONSHIP

Evidence from Developed Nations

The research community has presented strong evidence that shows unemployment is closely associated with pathology. There are two different interpretations of that relationship: (1) poor health is a factor in becoming and staying unemployed, or (2) once unemployed, new health problems develop or old ones are aggravated. Researchers who believe the second interpretation is correct point out that unemployment can directly undermine physical, psychological, and social well-being by disturbing established ways of life and attitudes.

Their position is supported by direct evidence and inference. Two different, but not mutually exclusive, pathways have been hypothesized. Unemployment causes a reduction in the material resources available to the unemployed, and unemployment causes psychological stress.

A loss of material resources, particularly if it is a long-term loss, results in downward social mobility. Downward social mobility may be considered a health risk as is shown in the literature that has demonstrated an inverse relationship between socioeconomic status and illness [Hodge *et al*, 1961; Antonovsky, 1967; Kitagawa *et al*,1973; Yeracaris *et al*,1978; Henry,1982; Feldman, *et al*, 1989]. Psychological stress can be generated by unemployment due to anxiety over the future, a loss of economic and

support to the suggestion that raised mortality among three separately identifiable groups in the household of an unemployed man is unlikely to be solely attributable to pre-existing ill health.

A prospective longitudinal study of unemployment and mortality in Denmark supports the results from the OPCS Longitudinal Study [Iversen, *et al.*, 1987]. The study population consisted of the total Danish labour force in the age range 20-64 years on November 9, 1970. The relative mortality for Danish men and women who were unemployed (N=28,000) and employed (N=2 million) on the census day was studied for the period 1970-1980. Relative mortality in relation to age, geographical region, housing category, local unemployment rate, and marital status was analyzed by sex.

For both men and women, all-cause mortality was significantly higher (40% to 50%) among the unemployed than among the employed. Occupational category, housing category, geographical region, and marital status had no effect on age-adjusted mortality among men. For women, age-adjusted relative death rates varied by geographical region and unemployed, married women had lower relative mortality than either the unmarried or the widowed/divorced.

Relative death rates for specific causes of death were analyzed for the entire study period and separately for the periods 1970-1975 and 1975-1980 for men and women. Among unemployed men, a consistent pattern was observed. Unemployed men had a significantly higher death rate in each study period for accidents, cancer, cardiovascular disease, suicide, and other diseases. The findings for unemployed women were not quite as consistent. Significantly, higher death rates were found in each study period for accidents, cardiovascular disease, suicide, and other diseases, with the exception that cardiovascular disease death rates were not elevated in the 1975-1980 period.

The Danish results correspond well with the British results. The major limitations of the Danish study are also similar to those of the British study. No information was available regarding the duration of unemployment or the number of episodes of unemployment experienced

during the study period. In addition, there was no information on health status prior to the census date. However, the researchers stated,

Like Moser, et al., we found roughly the same excess mortality in the two subperiods, which supports the suggestion that mechanisms other than health related selection also have an effect.

A number of researchers believe that the most probable mechanism linking unemployment to increased mortality is the indirect influence of psychological stress increasing susceptibility to pathologies. They have noted that a number of studies have suggested that unemployment increases susceptibility to mental health problems and they suggested that, in at least some people, unemployment will also increase susceptibility to physical illness, as proposed by Cassel (1976).

Evidence from Plant Closing Studies

Researchers have also used longitudinal study designs to investigate the relationship between unemployment and morbidity. Plant closings provide researchers with a sample of unemployed persons who cannot be said to have been selected for unemployment based on physical or mental health characteristics because the jobs of all individuals in the plant are abolished. Two plant closing studies were recently reported in the literature, one from Canada [Grayson, 1989], and one from Norway [Westin, et al., 1988]. Both studies found that the unemployed experienced a greater number of health problems than did the general population even more than two years following the plant closings.

Grayson (1989) studied approximately 400 employees (and their spouses) who lost their jobs when a manufacturing plant in Toronto, Canada, closed. Three surveys (3, 15, and 27 months) were conducted during a 27-month follow-up period. The main findings were: (1) former employees and their spouses experienced decreased psychological well-being following the closing; and (2) former employees and their spouses reported twice as many physical ailments than did the general population, over the study period, even after adjusting for age, sex, education, and employment status.

One-half of the former employees and spouses in Grayson's population ranked the stress associated with the plant closing 27 months earlier as greater than or equal to divorce. This increased sense of stress may have been due to several factors, including the fact that the closure resulted in considerable economic loss for the unemployed and the re-employed; overall those who found work were working at lower skill levels than previously and they suffered a decline in wages, and some of the re-employed had lost their first post-closure job.

Grayson concluded that the study showed that for his population, unemployment constituted a significant life-change event for former employees and their spouses. While he cautioned that the etiology of the reported illness is difficult to establish, he concluded that at least some part of the differences between the study population and the general population must be attributed to the plant closure.

Westin, *et al.* (1988), studied 85 people (13 men and 72 women) who lost their jobs when a Norwegian sardine factory was closed. Eighty-seven employees (66 women and 21 men) who remained employed at a nearby sardine factory owned by the same company served as a control population. After a four-year follow-up, Westin, *et al.*, reported on two endpoints: sick leave within the first year of closure and receipt of disability pensions within four years of closure. The study has been extended to include a ten-year follow-up period.

The first interviews and physiologic measurements were conducted within two months of closure. A second round of interviews took place fourteen months after closure, and a third was conducted approximately four years after closure.

Compared to the controls, the unemployed group had more than a twofold increase in sick leave during the first year of follow-up. In Norway, sick leave requires a physician's note of illness and people receiving unemployment benefits are eligible for sick leave.

The unemployed group also had three times the number of persons granted disability pensions compared with controls during the four-year

follow-up period. There was a significant excess rate of disability pensions for both men and women. Norwegian social security legislation requires a medical certificate indicating that an applicant's ability to work is permanently reduced by at least 50% due to illness, injury, or inborn defects, before a disability pension can be granted. The medical reasons for granting the disability pensions included musculoskeletal diseases, mental disorders, circulatory system disease, and respiratory system disease.

The researchers concluded that ". . . the observed increase in amount of sick leave and rate of disability pension for the former employees at Hetlevik was indeed caused by the impact of job loss on health and social adjustment." It would seem that in some population groups the impact of job loss can still be observed even after four years .

Physiological and Psychological Effects of Unemployment

The research reviewed above has supported the view that economic factors strongly influence the negative health effects experienced by some of the unemployed. Studies of unemployment in Sweden can be used as a strong test of the negative effects of the non-economic conditions associated with unemployment, because in Sweden, 90% of the previous wage is paid in unemployment benefits for 52 weeks following job loss. If the study group were to consist of married women whose husbands held secure jobs, then the economic effects would be even further controlled and any negative effects on health should most likely be due to the loss of psychosocial benefits that arise from employment. In the absence of financial hardship, long-term unemployment might even be beneficial for women who have the responsibility of caring for a home and children, as well as working.

A longitudinal case-control study with an unemployed group (N=200), consisting mostly of married Swedish women, was recently reported in the literature [Brenner and Levi, 1987]. Psychological and biochemical measures were taken periodically for both the cases and controls throughout the two-year study period.

During the anticipation and termination phases, the majority of the unemployed group experienced severe psychological and physiological stress. During the first six months of unemployment, the unemployed appeared to adapt to their situation with psychological and physiological measures returning to normal values. After six months, there was an increase in psychological and biochemical stress for most of the unemployed. Twenty-four months after initial job loss, the majority of the unemployed adapted to their situation, but a subgroup (40%) developed depression. Only 12% of the controls developed depression.

These results indicate that the stress of job loss has significant psychological and physiological effects on unemployed persons with relatively good financial security. Depression appears to be caused by more than solely financial concerns among the long-term unemployed. Lack of control may be a more important factor.

EVIDENCE FROM NEWLY INDUSTRIALIZED COUNTRIES

Singapore is the only newly industrialized country that has been studied to investigate the recession/mortality relationship. Since becoming a self-governing state in 1959, Singapore's experience has been one of rapid economic growth and it is generally considered one of the success stories of post-war economic development. However, Singapore experienced recessions in the mid-1960's and the mid-1980's. A significant positive lagged relationship between the unemployment rate and the cardiovascular mortality rate for males aged 40-64 years has been demonstrated for Singapore [Hauquitz,1989]. The Singapore results are consistent with the findings from Western developed nations.

It appears that the economic change/health relationship is of such a fundamental nature that the culture of the society (Asian or Western) makes little difference. The length of time for which a country has been industrialized also appears to be irrelevant. The pace of development can affect the expression of the relationships, but it does not remove them. The combined study results to date suggest that the above relationship may be an intrinsic part of industrial market economies.

CONCLUSIONS.

The findings from the reviewed studies demonstrate that economic factors are important explanatory variables for disease specific mortality (e.g., cardiovascular disease) in Western developed nations and in at least one newly industrialized nation. Real GNP per capita (income) is inversely related and unemployment positively related to cardiovascular disease mortality in the study populations. The benefits to health brought about by development and economic growth are counterbalanced by negative effects that are associated with the same phenomena. Government policies which lead to recession have life and death consequences not previously considered by policymakers.

More than half the planet's population lives in non-Western societies that are seeking to become industrial nations. Government officials (Cultural, Economic and Health ministries) should be aware of the above relationships as their societies move along the development path. Policies may be able to be implemented that can serve to minimize the negative health effects of industrialization. After all, as the former director of the World Health Organization Halfdon Mahler once wrote, "The goal of economic development is to improve the well-being of people" [Mahler, 1980].

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