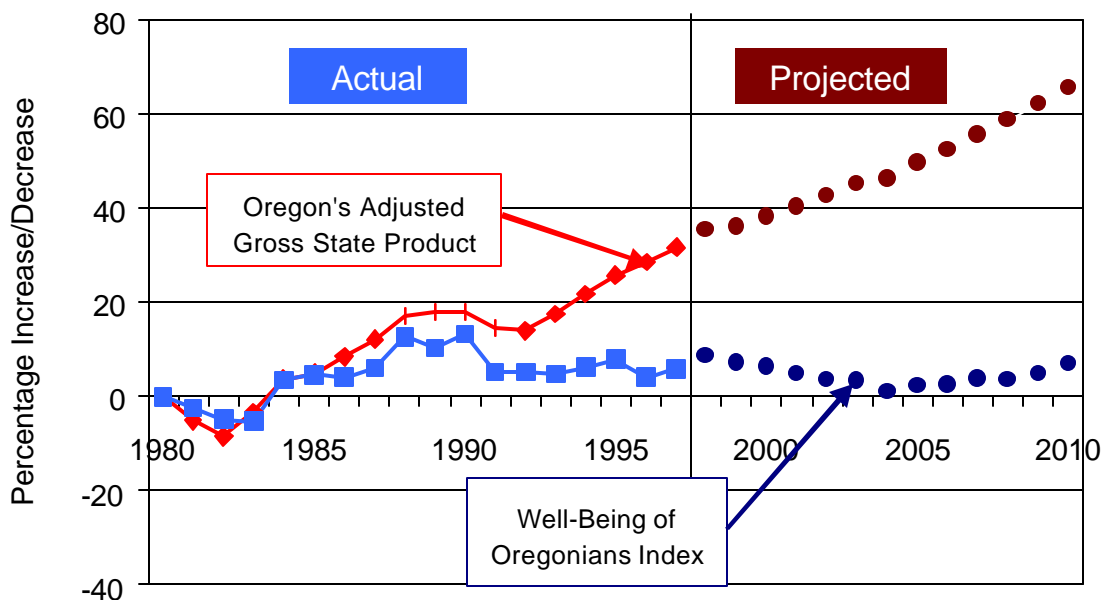


TO IMPROVE THE WELL-BEING OF OREGONIANS

INCREASING FINANCIAL AND SOCIAL CAPITAL FOR ECONOMIC GROWTH, HEALTHY COMMUNITIES AND STRONG FAMILIES

Gerald R. Kissler & Karmen N. Fore



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GERALD R. KISSLER AND KARMEN N. FORE¹

INTRODUCTION

The message of economic prosperity in the late 1990s seems to come from every corner (see for example, Fortune, 1999; The Oregonian, February 27, 1999). News reports cite record highs in the stock market, strong consumer confidence, and low unemployment. Yet during this time of remarkable prosperity there is a widespread feeling that our personal lives have not benefited proportionately. We became increasingly fearful of crime, particularly juvenile crime, and distrustful of one another in the early 1990s. People today often express concern about being stressed and having little time to spend with their families.

Rephrasing the central question in Forbes magazine's 75th Anniversary Issue "If this is one of our longest periods of economic expansion, why don't we feel better about it? What is causing the seeming divergence between economic growth and our social conditions? What would have the biggest impact on improving the well-being of the citizenry? Many believe the best answer is a stronger economy. Some would say that it is simply a matter of reducing poverty. Others would emphasize the need to reduce violence and crime. The purpose of this study is to explore these questions.

WHAT DO WE MEAN BY "WELL-BEING"?

Of course, the term "well-being" probably means different things to different people. Therefore, we start this paper with a definition of what the authors mean by well-being before discussing indexes of well-being and listing some of the factors that may cause well-being to improve.

¹ This work was partially supported by contracts with the Oregon Progress Board and Multnomah County. The authors would like to thank the many individuals who have offered thoughtful comments and suggestions on our work. Special thanks go to University of Oregon Professors Robert O'Brien and Jean Stockard for their path-breaking work and helpful suggestions.

We use “well-being” as a macro-level term for social health — corresponding to macro-level economic indicators, like the Dow Jones Industrial Average and the Gross Domestic Product (GDP). One macro-level index does not substitute for the other, however, because a booming stock market and rising GDP do not necessarily mean that the well-being of the citizenry is improving. Therefore, policy leaders need another macro-level index to measure changes in the quality of our lives. Rather than focusing on short-term social conditions and local issues, we believe an index of well-being should incorporate a long-term and macro-level view so that a broad cross-section of society is considered and the quality of life for future generations is addressed.

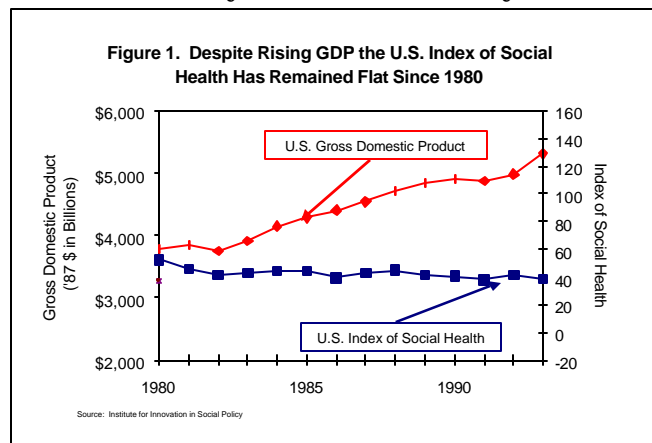
DEVELOPMENT OF A MACRO-LEVEL INDEX OF WELL-BEING

For the Nation

Macro-level indicators for social well-being have been developed before. For example, the U.S. Index of Social Health was developed by the Institute for Innovation in Social Policy at the Fordham Graduate Center (Miringoff, 1995). The Fordham Index, which is a composite of 16 economic and social factors, was developed to answer the following question: Does the nation's social health improve or decline with corresponding fluctuations in the economy?

The Fordham index has remained relatively flat since the early 1980s, in spite of substantial growth in the U.S. economy (see Figure 1). The divergence of the two lines in Figure 1 graphically characterizes the paradox central to this paper.

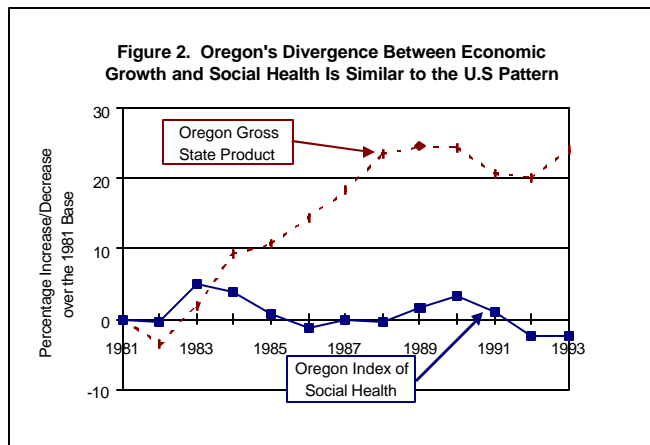
Satya Brink and Allen Zeesman (1997) developed a similar index for Canada. Like the U.S. Index, the Canadian Index of Social Health improved with economic growth until the early 1980s. Since that time the social health indexes in both countries have stagnated, in spite of continued GDP growth. Clearly, as both studies conclude, one macro-level measure, such as GDP, is no longer adequate as an indicator of the nation's economic and social well-being.



For a State or Province

The concept of a macro-level social index has also been explored at the state level. For example, the Institute for Innovation in Social Policy (Miringoff, Miringoff and Opdyke, 1996) developed an Index of Social Health for the state of Connecticut. In their Canadian study Brink and Zeesman (1997) also developed indexes for each of the provinces. The Canadian national pattern of divergence between economic and social indexes was reflected in the graphs for most of its provinces.

Karmen Fore (1998) developed an Oregon Index of Social Health, as part of her Master's thesis work in the Department of Planning, Public Policy and Management at the University of Oregon. She used the Gross State Product (GSP) as the measure of economic growth that corresponds to GDP at the national level. Her Oregon Index of Social Health was based upon the following factors: infant mortality, child abuse reports, births to unwed mothers, teen suicides, drug-related arrests, high school dropouts, average weekly earnings, unemployment rates, highway deaths due to alcohol, homicides, and food stamp coverage. Her findings at the state level were similar to those in the Fordham study (see Figure 2).



The national and state analyses shown in Figures 1 and 2 were designed primarily to describe the differences between economic and social conditions, but they tell us little about the reasons for the divergence between economic conditions and social health. Policy makers interested in improving the

condition of the citizenry want answers to the following questions: What is the problem? What's causing it? What can we do to fix it? Therefore, we were interested in extending the earlier work by creating a new macro-level index for Oregon based upon the state's benchmarks, looking for the factors that cause that index to increase or decrease, and developing recommendations for policy makers. These topics are addressed under major headings below and again in the Conclusion section of this paper.

For a County

We are unaware of any published work on the development of a macro-level index of well-being at the county level. While the concept should be of interest to county commissioners and other policy leaders at that level, several factors complicate the development of such an index.

First, accurate, longitudinal data may not be available. For example, there is no direct equivalent of GDP nor is there a long time series of poverty estimates at the county level. Second, statistical relationships may be harder to detect because data at lower levels of aggregation based upon smaller population sizes are likely to exhibit greater variability. Third, social problem indicators, like juvenile arrest and teen pregnancy rates, are more likely to be influenced by changes in local policy, whereas these local policy changes tend to cancel each other out at the state level.

FIVE QUESTIONS ADDRESSED BY THIS STUDY

1. Is the Divergence between Economic and Social Conditions Also Found in Oregon?

Previous studies (Miringoff, 1995; Brink and Zeesman, 1997) had established the pattern of divergence between economic and social conditions in the U.S. and Canada during the 1980s. A preliminary study (Fore, 1998) found a similar pattern for the state of Oregon. The first purpose of this study was not only to confirm that there was a divergence between economic growth and Oregon's social conditions but also to develop a methodology for explaining the year-to-year variance and forecasting the Index of Well-Being.

2. Can the Well-Being Concept Be Extended to the County Level?

We were interested in trying to analyze data at the county level in an attempt to extend the well-being concept because we believed that it could be of value to local policy leaders. Also, seeing policy-related impacts on county social indicators, like juvenile arrest and drug-related arrest rates, might influence our conclusions about the effects of policy on Oregon's Index of Well-Being.

3. What's the Problem?

The problem is that Oregon's social health has not improved since 1980, in spite of strong economic growth. Two national trends might help us understand the nature of the problem: 1) the lack of real earnings growth and 2) more children living in families under stress. These national trends, which are discussed below, suggest that today's macro-level problem is associated with income stagnation for workers and the deteriorating conditions of America's youth.

The Lack of Real Earnings Growth

During the 20th century Americans became better educated, thanks in part to social investments, like the G.I. Bill, federally subsidized student loans, and Pell Grant programs. The well-documented relationship between levels of education and earnings has become even more tightly coupled in the

Information Age, as economic changes have placed increased value on a skilled workforce (Council of Economic Advisors, 1999).

In addition, private sector investments in equipment and better-trained workers led to productivity increases for more than two decades after World War II, which enabled earnings to rise faster than inflation and standards of living to increase (Stein and Foss, 1992: 78). For example, the productivity of the American workforce increased by an average of three percent per year between 1948 and 1973. However, annual productivity increases averaged only one percent between 1973 and 1989. As a result, inflation-adjusted earnings have stagnated and each generation can no longer expect to have a higher standard of living than its parents.

Business Week (1998) noted that productivity rates have been rising again in manufacturing and that actual productivity increases are poorly measured in several other industries (e.g., finance, media, entertainment, and communications). Technological innovation, which is leading to unmeasured productivity gains in such industries, may also be an important factor contributing to recent increases in earnings that are outpacing inflation (Greenspan, 1999).

More Children Living in Families under Stress

Poverty rates for the elderly have fallen sharply from 35% in 1960, to 25% in 1970, and only 11% in 1997 (Dalaker and Naifeh, 1998), thanks largely to Social Security and corporate pension plans. However, the poverty rate for children under the age of 18 in 1997 was 20%. For related children under the age of six in a female-headed household with no spouse present the poverty rate was 59%!

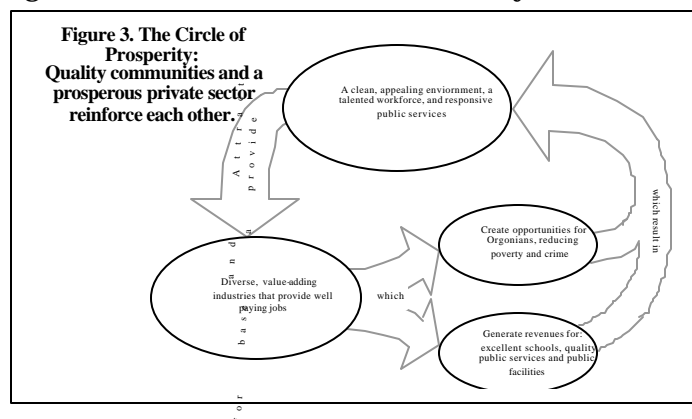
Concerns about the well-being of America's youth go well beyond financial conditions, however. Child abuse and neglect are increasing dramatically (Kelley, Thornberry, and Smith, 1997; Kumpfer and Bayes, 1995). Domestic violence is a growing concern and a clear link has been established between witnessing family violence and later delinquent acts, poor school performance, poor mental health, and increased teen pregnancy (Thornberry, Lizotte, Krohn, Farnworth and Jang, 1994). Also, more children are affected by a rising tide of substance abuse by parents, child abuse and neglect, the absence of community ties, gun availability, gangs, and poor parenting while there has been a corresponding decline in resources, opportunities, and support (Office of Juvenile Justice and Delinquency Prevention, 1995).

4. What's Causing It?

Why has our social health stagnated during one of the longest periods of economic expansion on record? In particular, why have the conditions of America's youth deteriorated during a period of strong economic growth. Another purpose of the current study was to test three frequently mentioned hypotheses: 1) financial capital, 2) social capital and 3) drugs.

Financial Capital

Since the days of Adam Smith, economists have assumed a close relationship between economic and social conditions. According to classical theory, a weakened economy reduces average earnings and puts more people out of work, which contributes to crime and other social problems. Indeed, this concept was imbedded in Oregon's 1989 state strategic plan, *Oregon Shines*. The authors assumed that deteriorating social conditions were caused by the state's long and deep economic recession during the early 1980s. The diagram that summarized the state strategic plan, "The Circle of Prosperity," suggested that in a healthier economy companies would provide more well-paying jobs, which would create opportunities for Oregonians, lower poverty rates, and reduce crime.



The Circle of Prosperity Is Broken

When the state strategic plan was updated, the Governor's Task Force reported that Oregon's economy had experienced a stunning turnaround in the 1990s (Kissler and Tryens, 1997: 29). Earnings had risen and unemployment had reached record lows. Yet, despite these dramatic improvements in the economy there was little change in some social indicators, like teen pregnancy and overall crime rates. Moreover, other indicators, like juvenile arrests, teen drug use, and child abuse reports were getting worse.

Karmen Fore (1998) found a high correlation between GSP growth and economic well-being factors, such as average weekly earnings and unemployment rates. However, there was a high but inverse correlation between GSP growth and several social indicators. Child abuse reports, drug-related arrests, and births to unwed mothers got worse during periods of strong economic growth. In short, a healthy economy led to more jobs, but it did not reduce crime and other social problems, as predicted by the Circle of Prosperity (cf., center-right oval in Figure 3). In fact, just the opposite occurred.

Social Capital

The state's updated strategic plan, *Oregon Shines II*, attributed the continued decline of some social indicators to a fading sense of community and more stress on families (Kissler and Tryens, 1997: 41). Researchers in sociology and public policy often discuss this as a loss of “social capital” and highlight the importance of positive assets in children's lives.

University of Oregon Professors Robert O'Brien and Jean Stockard have recently completed two illuminating studies along these lines. In the first study (O'Brien, Stockard, and Isaacson, 1999) they found that changes in homicide rates since the 1930s were linked to two indicators of social capital: 1) relative size of the cohorts and 2) the percentage of cohort members born to unwed mothers. In a follow-up study these two factors accurately predicted changes in suicide rates, which suggests that they may be general indicators of a loss of social capital applicable to a broad range of social concerns. Therefore, our methodology (described in the next section of this paper) started with their indicators of *the loss of community* and *more stress on families* and then added other measures.

The Loss of Community

O'Brien, Stockard and Isaacson (1999) explained that children born in relatively large cohorts, like the “baby boom” generation, stretch both community and family resources. They wrote, “Members of these cohorts grow up with more children per parent, more children per classroom, and more children per counselor.” Unless there is exceptional effort from society, children in large cohorts will receive below average levels of adult supervision and the result will be higher levels of problem behavior.

Robert Putnam (1995) and Frances Fukuyama (1999) have discussed other indicators of America's loss of community during the second half of the 20th century. For example, Putnam believes that neighborliness and involvement in community activities are components of a healthy social network. Unfortunately, Fine (1992) noted that “72% of a nationally representative sample of individuals reported that they did not know their next-door neighbors and 67% reported that they had not spent any time in community activities.”

Fukuyama (1999) pointed to several other indicators of seriously deteriorating social conditions in most of the industrialized world between the mid-1960s and early 1990s,

Marriages and births declined and divorce soared; and one out of every three children in the United States and more than half of all children in Scandinavia were born out of wedlock. Finally, trust and confidence in institutions went into a forty-year decline. Although a majority of people in the United States and Europe expressed confidence in their governments and fellow citizens during the late 1950s, only a small minority did so by the early 1990s. The nature of people's involvement with one another changed as well ¾ although there is no evidence that people associated with one another less, their ties tended to be less permanent, looser, and with smaller groups of people...It is very unusual for social indicators to move together so rapidly; even without knowing why they did so, we have cause to suspect that the reasons might be related.

These findings point to the breakdown of communities and the loss of social trust in America and many other industrialized nations. As Thomas (1998) notes “social trust is a form of ‘social capital,’ which a society gradually accumulates through micro-level interactions of individuals and which then becomes a public good on which others draw.” But without these interactions social trust declines. Putnam (1995) even found that the proportion of Americans saying that most people can be trusted fell by more than a third between 1960 and 1993.

Therefore, we added two items from the General Social Survey on trust and neighborliness, as other indicators of Social Capital — Communities. Even though these data are from a national public opinion survey rather than a state of Oregon poll, we assumed that the overall trend and pattern of year-to-year fluctuations in Oregon would be similar to that for the nation as a whole.

More Stress on Families

O'Brien, Stockard and Isaacson (1999) also point to the research on the sociology of the family, which indicates that children from homes with insufficient attention are more likely to be delinquent (see for example, Furstenberg and Hughes, 1995; McLanahan and Sandefur, 1994; Nagin and Paternoster, 1991). Laurence Steinberg (1996: 19) provided some alarming statistics to demonstrate that many parents are disengaged from their children. For example, he found that nearly one-third of students say their parents have no idea how they are doing in school. One-quarter say they could bring home grades of D or worse without upsetting their parents. More than 40 percent of all parents never attend their children's school programs. And, the level of parental involvement in school activities drops off after elementary school.

Steinberg (1996: 187) summarizes the implications of declining parental attention in saying,

The first, and most significant, problem, is the high prevalence of disengaged parents in contemporary America. By our estimate, nearly one in three parents in America is seriously disengaged from his or her adolescent's life, and, especially, from the adolescent's education...Not surprisingly, parental lack of interest is strongly associated with children's academic difficulties and low school achievement. In addition, parental disengagement is a very good predictor of many of the problem behaviors whose levels have reached alarming proportions in the past twenty-five years; alcohol and drug abuse, delinquency and violence, suicide, and sexual precocity.

O'Brien, Stockard and Isaacson (1999) used the percentage of births to unwed mothers as an indicator of parental attention because a single parent struggling to make ends meet finds it harder to provide as much supervision, consistent discipline, or attention as two parents can provide. As a result, children from single-parent homes are more at risk than those from two-parent homes.

Another indicator of increasing stress on families during the second half of the 20th century is the increase in the divorce rate. Nationally, divorce rates doubled between the mid-1960s and the mid-1970s, reflecting both a change in public attitudes towards divorce and changes in the law that made it easier to get a divorce.

While both of these measures are useful, neither is an ideal indicator of parental attention. For example, a mother unwed at the time of her child's birth may marry later and the child may be raised in a two-parent family. Similarly, a divorce counted in the statistics may occur before any children are born or after the children have left home. And, of course, many children may have a much better home life if the biological father leaves or if a strained relationship results in divorce.

Of course, the critical factor for children is not the absence of their parents' wedding certificate, but rather the lack of parental attention and involvement in their lives. The importance of parental engagement was highlighted in the largest study of American adolescents ever undertaken: The

National Longitudinal Study of Adolescent Health. After controlling for background variables, Resnick, Bearman, Blum, Bauman, Harris, Jones, Tabor, Beuhring, Sieving, Shew, Ireland, Bearinger, and Udry (1997) found that feeling loved and wanted by parents helps teen-agers avoid high-risk activities, regardless of whether a child comes from a single-parent or two-parent household. The amount of time spent with parents had a positive effect on reducing emotional distress, but feeling “connected” to parents (warmth, loving, and caring) was five times more powerful.

We would have preferred to use a more direct measure of parental engagement or “connectedness” but no longitudinal time series was available. Therefore, these variables were included in our study on the assumption that more non-marital births and more divorces in a society will result in more children raised with less parental attention and involvement than a society with fewer births to unwed mothers and fewer divorces.

Drugs

Drug-related arrests have tripled since the 1950s. The greater availability of illegal drugs is a serious problem because many crimes are committed to pay for drugs and substance abuse is often associated with domestic violence. For example, one study of Oregon children in foster care (Child Welfare Partnership, 1999) found that 62 percent of their parents were involved with drugs and half were in families plagued with domestic violence. We did not have a longitudinal measure of domestic violence but we did include the percentage of drug-related arrests as an indicator of the prevalence of drugs in society.

5. What Can We Do about It?

The current study was conducted to determine the extent to which the factors described above explain the year-to-year fluctuations in a macro-level index of the well being of Oregonians. If, indeed, these are found to be powerful predictors, then they could be used to estimate social conditions over the next 10 to 15 years. Knowing what factors today may be causing tomorrow’s problems could lead to a broad discussion among community and political leaders about strategies for improving upon the baseline forecast.

Therefore, this paper will conclude with a discussion of policy recommendations that follow from our findings. It is important to remember, however, that the level of analysis in this study is the state of Oregon. The macro-level index of Oregon’s well-being was created from aggregate data using factors, such as unemployment rates and arrest rates, for the state. The database does not contain information about the employment or poverty status for someone who was arrested.

As a result, we can only identify risk factors for society, not risk factors for individuals. If, for example, we were to find that more drug-related arrests were associated with lower levels of well-being, we could only conclude that the prevalence of drugs is a risk factor for the state. We could not conclude that individuals who use drugs have lower levels of well-being or, for example, that drug users are more likely to commit other crimes. Readers interested in a summary of the research on risk factors for individuals might wish to consult the “Oregon Public Health Association Policy Task Force Report on Adolescent Risky Behavior” (Riley et. al., 1998).

METHODOLOGY

DATA GATHERING

A list of all of the variables used in this study is included as an attachment. Notations indicate the definitions and sources of the data. There were four aggregate indicators of financial capital (GSP, the unemployment rate, average annual earnings, and the poverty rate), five measures of available social capital (relative cohort size, percentage of non-marital births, divorce rate, trust, and socializing with neighbors), one measure of the prevalence of drugs in society (drug-related arrests), and three social problem indicators (juvenile arrest rate, teen pregnancy rate, and overall crime rate). Raw data for these factors are included in the Appendix.

REPLICATING THE PREVIOUS STUDIES

Measure of Economic Growth

Like the previous studies, we used Gross State Product (GSP) as our indicator of economic growth. Because we wanted to compare growth rates we followed Brink and Zeesman's (1997) method, which adjusted GSP for inflation and population growth.

Measure of the Well-Being of Oregonians Using the State's Benchmarks

The first step was to develop a macro-level index of the well-being of Oregonians. Rather than arbitrarily selecting from available factors, we relied upon the economic and social benchmarks monitored by the Oregon Progress Board to determine if the state is moving toward the vision described in the state strategic plan. We eliminated benchmarks, like high school dropouts, if consistent data were not available from 1980. In the end our Well-Being of Oregonians Index was based upon six of the Oregon benchmarks:

- Unemployment rate,
- Average earnings,
- Poverty rate,
- Juvenile arrest rate,
- Teen pregnancy rate, and
- Overall crime rate.

In contrast to the "cradle-to-grave" indexes used in previous studies, this index focuses on working-age adults and youth, while placing less emphasis on infants and the elderly. The first three factors address the conditions of adults during their working years, which also affect the well-being of other family

members. The last three factors are indicators of social problems that affect our youth and young adults. As mentioned earlier, poverty rates among the elderly have fallen considerably. Also, medical advances have improved health care for the elderly and reduced infant mortality. As a result, this Well-Being Index targets the populations of greatest current concern.

In addition to a different set of factors used to create the index, the methodology used in the present study differed from its predecessors in several respects. First, negative factors, such as unemployment rates and crime rates, were inverted so that they could be combined with positive factors, such as higher average earnings. Second, all factors were converted to percentage increases/decreases over the 1980 base year so that they could be compared. The Index of Well-Being was calculated as the sum of the resulting percentage increases/decreases for each factor divided by six. Third, we analyzed the data to determine why the Index of Well-Being had stagnated. Finally, a series of regression analyses were performed to build a predictive model, such as the one used for the forecast shown in Figure 4.

ONE-WAY ANALYSIS OF VARIANCE

We wanted to know if the fluctuations in the variables used to create the Index of Well-Being were statistically significant. Therefore, we grouped the data for 1980-1984, 1985-89, 1990-94, and 1995-97. If the results of the analysis of variance were statistically significant, a Tukey's b post hoc analysis was used to compare groups.

SIMPLE CORRELATIONS

An intercorrelation matrix, included in the Appendix, was created so that we could determine whether the groups of variables chosen for this study were actually related to each other as hypothesized in the Introduction. First, the measures of financial capital were examined. Second, the measures of social capital were reviewed. Third, the relationship between the prevalence of drugs and others variables was studied. Last, the relationships among the three social problem indicators were analyzed.

REGRESSION ANALYSES

After graphing the relationship of our Well-Being Index to GSP growth we wanted to find out what was causing it to stagnate. Therefore, we used stepwise linear regression to isolate the main factors that explain year-to-year fluctuations in the Well-Being Index.

Explaining the Variance in the Well-Being Index

Seven factors were used in a stepwise linear regression analysis: 1) adjusted GSP, 2) relative size of the 15 to 19 year old cohort, 3) percentage of all

births that were non-marital 15 years earlier, 4) divorce rates 15 years earlier, 5) percentage who agree that most people can be trusted, 6) the percentage who never or only once a year spend an evening with neighbors, and 7) the percentage of all arrests that are drug related. The first is a measure of financial capital. The second through sixth are measures of social capital. Relative cohort size is a measure of adult supervision in the community. Trust and socializing with neighbors are indicators of our sense of community. The third and fourth are indicators of stress on families. Divorce rates and the percentage of non-marital births are rough indicators of parental attention and involvement. And, the percentage of drug-related arrests is a measure of the prevalence of drugs in society.

Note that for juvenile arrests and teen pregnancies the relevant cohort is 15 to 19 year-olds. Because the Oregon Benchmark definitions include only those under 18, we could have used the 15 to 17 year-old cohort. We chose the 15 to 19 year-old cohort, however, because the biological fathers are typically a few years older than teen mothers on average and because delinquency is often influenced by males a few years older.

Explaining the Variance in Oregon's Juvenile Arrest Rate

Because O'Brien, Stockard and Isaacson (1999) had found a strong relationship between social capital and U.S. homicide rates, we wanted to see if a similar pattern existed in Oregon. Therefore, our measures of social capital were used in a separate stepwise regression analysis with the juvenile arrest rate as the dependent variable.

ANALYSIS OF DATA FOR A LARGE, METROPOLITAN COUNTY

We also developed a Well-Being Index and analyzed juvenile arrest rates for Multnomah County — a county of more than 600,000 people that includes the center of Oregon's major metropolitan area. Our purpose was to test the limits of this approach and determine whether patterns found at the national and state levels are also found at lower levels.

Like the Well-Being of Oregonians Index, the County Index was based upon six economic and social factors. Four of those factors (unemployment rate, average earnings, juvenile arrest rate, and teen pregnancy) were the county equivalent of the factor used to create the state index. Because there were no annual poverty figures for the county we used Oregon's poverty rate. While the absolute values for the state and county undoubtedly differ, we assumed that the year-to-year increases and decreases would be similar. For the sixth factor, Multnomah's adult arrest rate was used in the County Index, whereas the state's overall reported crime rate was included in the Well-Being of Oregonians Index.

There is no direct equivalent of the Gross State Product for counties. Therefore, we had to develop an estimate of the “Gross County Product.” Because earnings account for 60 percent of the Gross State Product we used the ratio of earnings in Multnomah County to total earnings for the state to estimate GCP. Also, we used the combined Index of Stress on Families rather than the two separate independent variables — percent non-marital births and the divorce rate because the index provided a better fit to the data at the county level.

The method for analyzing juvenile arrest rates at the state level was also used on Multnomah County’s juvenile arrest rate. We used the same methodology to analyze drug-related arrests because policy leaders in Multnomah County were particularly concerned about increases in that category.

RESULTS

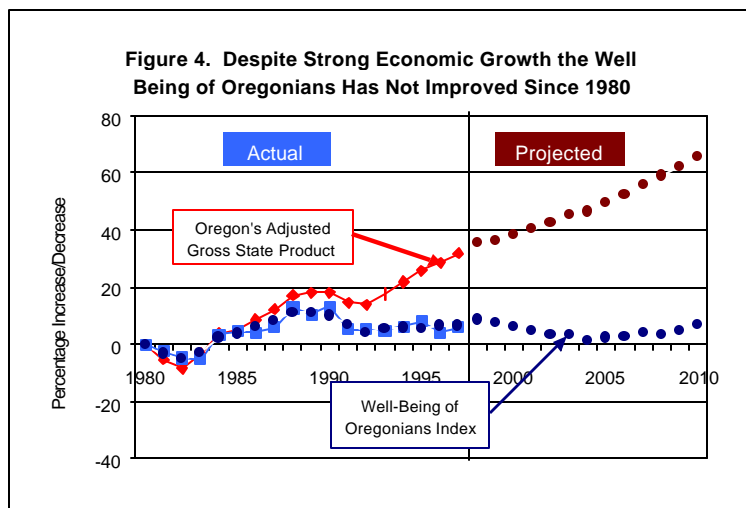
REPLICATING THE PREVIOUS STUDIES

Figure 4 shows the adjusted GSP and Well-Being Index. Actual data for 1980 to 1997 are shown in the left panel. The projections for 1998 to 2010, which are shown in the right panel, will be described below.

In general, Oregon’s pattern was similar to that found in other studies. However, the divergence between economic and social conditions in Oregon, as measured with these six benchmarks, began in the 1990s, rather than the 1980s.

The decline in the Well-Being Index during the early 1980s corresponds to the long and deep recession, which put many Oregonians out of work and caused earnings to decline.

From the mid-1980s until 1990 Oregon’s economy grew. The state experienced a mild version of the national recession in the early 1990s, which was followed by sharp growth for the remainder of the decade but the Well-Being Index remained relatively flat during this period.



ONE-WAY ANALYSIS OF VARIANCE

There was a significant reduction in the unemployment rate between 1980 and 1997 ($F_{3,17} = 11.56$, $p < .0001$). Unemployment in the 1980-1984 period was significantly higher than the 1985-89, 1990-94, and 1995-97 periods. There was a significant increase in real earnings between 1980 and 1997 ($F_{3,17} = 4.12$, $p < .05$). Real earnings in the 1995-1997 period were significantly higher than the earlier periods. The difference in poverty rates was not statistically significant ($F_{3,17} = 1.64$, $p > .05$).

There was a significant increase in the juvenile arrest rate ($F_{3,17} = 21.77$, $p < .0001$). More recent periods were significantly higher than earlier periods. The difference in teen pregnancy rates was not statistically significant ($F_{3,17} = 1.58$, $p > .05$). There was a significant difference in overall crime rates between 1980 and 1997 ($F_{3,17} = 6.11$, $p < .01$). The overall crime rate in the 1980-1984 period was significantly higher than the later periods.

SIMPLE CORRELATIONS

The intercorrelation matrix is reproduced in the Appendix. The signs for all negative factors (e.g., poverty, juvenile arrests, teen pregnancy) were inverted. As a result, a positive correlation of .53 between GSP and the poverty rate should be interpreted as indicating that the poverty rate improves as GSP increases.

Financial Capital

The measures of financial capital are shown in the upper left corner of the intercorrelation matrix. GSP, unemployment rates, inflation-adjusted earnings and poverty rates were related and most of the intercorrelations were statistically significant.² Unemployment, poverty rates and average earnings improved during periods of economic growth. However, the measure of inflation-adjusted average earnings was not correlated with poverty ($r = .00$, $p > .05$) or unemployment ($r = .42$, $p > .05$).

Social Capital

Measures of social capital can be found in the center of the intercorrelation matrix. Non-marital births, the divorce rate, socializing with neighbors, and trust were highly correlated. Relative cohort size was also correlated with these other measures of social capital but the simple correlations had a negative sign. When cohort size entered the regression equation for the Index of Well-Being and the juvenile arrest rate, however, the partial correlation coefficient had the same sign as the other measures of social capital.

² These correlations were for the years 1980 through 1997 — a relatively low-inflation period. When the high-inflation years from 1975 through 1979 were added, none of the correlations with inflation-adjusted earnings were statistically significant.

The two items from the General Social Survey were highly correlated. Neighborliness and trust got worse when GSP and the unemployment rate improved. Small birth cohorts were correlated with GSP growth, low unemployment rates, and high earnings.

Drugs

The percentage of all arrests that were drug-related was correlated with GSP growth and low unemployment. Presumably, drugs become affordable to a larger segment of society when the economy is strong. This variable was also related to juvenile arrests and the overall crime rate. When there was a higher percentage of drug-related arrests trust was low and people were less likely to socialize with their neighbors.

Social Problem Indicators

The social problem indicators are in the lower right-hand corner of the matrix. The three social problem indicators used in the construction of the Well-Being Index were not related to each other. In addition, the measures of financial capital were typically inversely related to the social problem indicators (i.e., social problems got worse when the economy improved). In many cases these negative correlations were high and statistically significant. Consistent with the argument that relatively large birth cohorts get less adult supervision, small birth cohorts 15 years earlier were associated with lower teen pregnancy rates.

Improvement in neighborliness and trust corresponded to improvement in the juvenile arrest rate and the overall crime rate. However, teen pregnancy got worse when neighborliness improved. Low divorce rates were associated with fewer juvenile arrests and lower overall crime rates 15 years later, but not lower teen pregnancy rates. High divorce rates were associated with small birth cohorts.

Summary

In general, the correlation pattern matched expectations. The measures of financial capital were positively related to each other but negatively related to the measures of social capital. Increases in the social problem indicators were typically associated with less social capital, as measured by relatively large cohort sizes, more non-marital births 15 years earlier, higher divorce rates 15 years earlier, less trust, and seldom socializing with neighbors.

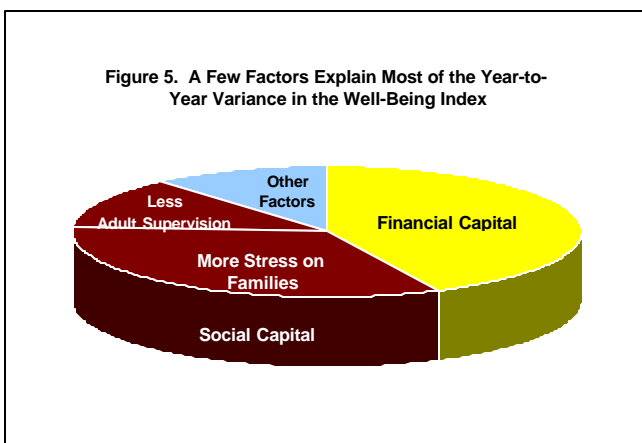
CORRELATIONS WITH GSP	
Social Indicator	r
1. Related to Economy	
Unemployment Rates	.91
Average Annual Earnings	.61
Poverty Rates	.53
2. Not Related to Economy	
Teen Pregnancies	.36
3. Negative Relationship to the Economy	
Juvenile Arrests	-.75

However, teen pregnancy rates did not fit the expected pattern.
Regression Analyses

Correlations with Independent Variables

To explain why the Well-Being Index has remained flat while the economy has grown we must draw a distinction between the first three factors used for the index and the last three. Unemployment rates, average earnings, and poverty rates get better as the economy improves (see the positive correlations in the sidebar).

There is a weak relationship between the GSP and teen pregnancy but it is not statistically significant. However, juvenile arrests and overall crime rates are related to the economy but in the opposite direction (i.e., they were higher during the economic boom of the 1990s than during the downturn in the early 1980s). In short, the bottom line in Figure 4 has remained flat because gains in category #1 have been offset by losses in category #2.



Explaining the Variance in the Well-Being Index

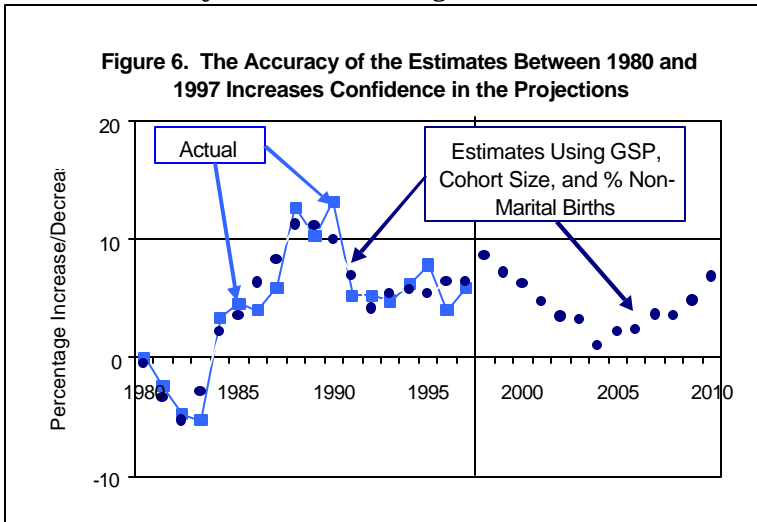
Stepwise linear regression found three of the seven factors that explain 89% of the year-to-year variance in the Well-Being Index: 1) Financial Capital — adjusted GSP, 2) Social Capital for Communities — relative size

of the 15 to 19 year old cohort, and 3) Social Capital for Families $\frac{3}{4}$ the percentage of non-marital births 15 years earlier ($F_{3,14} = 36.3$; Multiple $R = .94$; R Square = .89). The two measures of Social Capital explain more of the variance than the measure of Financial Capital (see Figure 5). The two items from the General Social Survey (trusting people and socializing with neighbors) and the percentage of drug-related arrests did not enter.

PROJECTING FUTURE VALUES OF THE WELL-BEING INDEX

The Beta weights produced from the regression analysis were used to predict values for the Well-Being Index from 1998 to 2010 (see the right panel of Figure 4). Estimated values for GSP were derived from the state economic forecast developed by the State of Oregon's Office of Economic Analysis (1998). Predicted values for relative cohort size were developed by the Center for Census and Population Research at Portland State University. Actual values were used for the percentage of babies born to unwed mothers between 1983 and 1995.

As indicated in Figure 4, the projection model estimates real growth in GSP per capita by the year 2010 will be more than 60% higher than the 1980 base year. However, the Well-Being of Oregonians Index will be only 10% above the base year. If there had not been a loss of social capital, we estimate that the current value of the Well-Being Index would have been 20% higher than the base year and 40% higher in 2010.



How Accurate Are the Estimates?

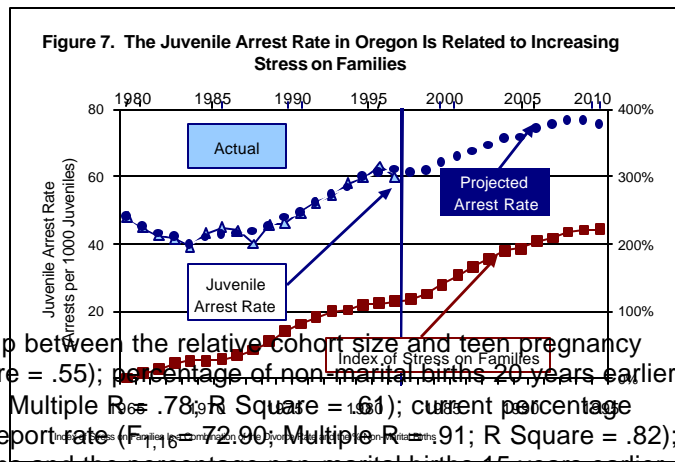
Figure 6 is a blow-up of the portion of Figure 4 around the axis from -10 percent to +20 percent. Actual values for the Well-Being of Oregonians Index are shown as boxes connected by a solid line. Estimates based upon the

Beta weights from the regression analysis are shown as circles. Corresponding to the high R square value of .89, the graph shows that the model accurately tracks the actual data from 1980 to 1997.

Explaining the Variance in the Juvenile Arrest Rate³

Our measures of available social capital were excellent predictors of the juvenile arrest rate. Three variables explain 94% of the year-to-year variance in Oregon’s juvenile arrest rate: 1) Social Capital for Communities — relative size of the 15 to 19 year old cohort, 2) Social Capital for Families $\frac{3}{4}$ the percentage of non-marital births 15 years earlier, and 3) Social Capital for Families $\frac{3}{4}$ the divorce rate 15 years earlier ($F_{3,19} = 107.34$; Multiple R = .97; R Square = .94).

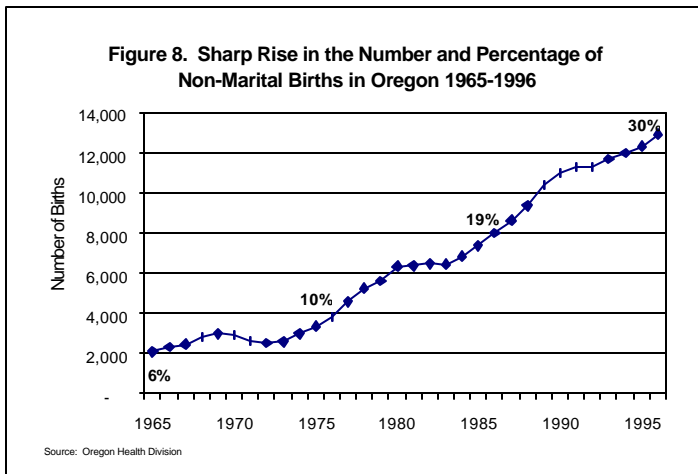
While the media has hailed the national reduction in violent juvenile crime, the juvenile arrest rate for all crimes in 1997 was 10 percent



³ We also found a significant relationship between the relative cohort size and teen pregnancy ($F_{1,16} = 19.64$; Multiple R = .74; R Square = .55); percentage of non-marital births 20 years earlier and the overall crime rate ($F_{1,21} = 33.40$; Multiple R = .78; R Square = .61); current percentage non-marital births and the child abuse report rate ($F_{1,16} = 72.90$; Multiple R = .91; R Square = .82); and current percentage non-marital births and the percentage non-marital births 15 years earlier ($F_{1,21} = 151.22$; Multiple R = .94; R Square = .88).

higher than 1991 and 25 percent higher than 1981. Oregon's juvenile arrest rate has also been rising (see Figure 7).

The top line in Figure 7 connects the actual values for the juvenile arrest rate (shown as triangles). So that Figure 7 would be less cluttered, we combined the percentage of non-marital births and divorce rate into an Index of Stress on Families by averaging the increases over the base year. The bottom line in Figure 7 is associated with the years at the bottom of the graph. The Index of Stress on Families in 1980 was 100% higher than the 1965 base year. The juvenile arrest rate 15 years later was 60 per thousand, as compared with 48 per thousand in 1980.



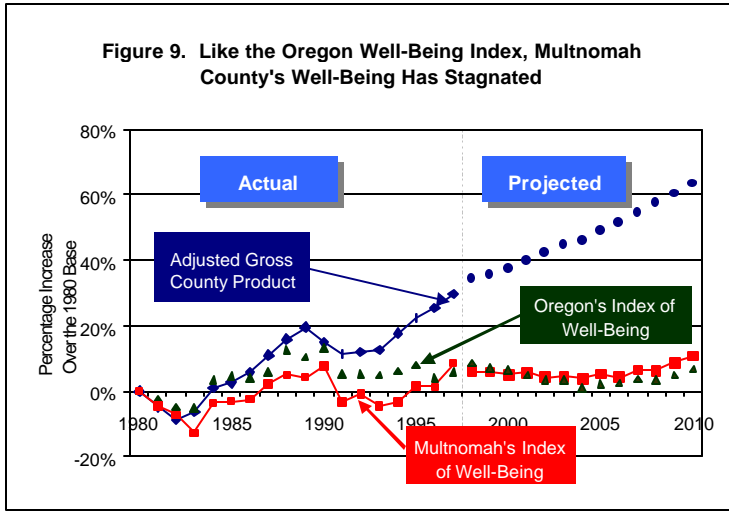
the echo of the baby boom becomes young adults. However, the model predicts an increase in the rate because more children were born to families under stress between 1985 and 1995.

The projected values for the juvenile arrest rate are shown as circles in Figure 7. All other things being equal the model would have projected lower juvenile arrest rates because cohort sizes (not shown in Figure 7) will decline during the period from 1997 to 2010 as

Figure 8 shows the rise in the number and percentage of non-marital births in Oregon. In 1965 6% of all Oregon babies were born to unwed mothers. That figure rose to 10% in 1975, 19% in 1985 and 30% in 1996.

The Index of Well-Being for Multnomah County

The general pattern for Multnomah County's Well-Being Index was similar to the pattern described above for the state (see Figure 9). The County's Index of Well-Being is shown as boxes connected by a line in Figure 9. Oregon's Index of Well-Being is shown as triangles without a connecting line. The values for the Well-Being Indexes at the state and county level are quite similar.

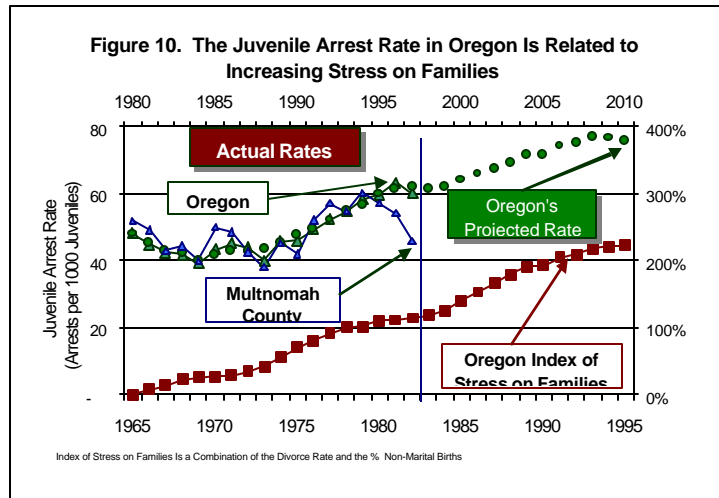


Social Problem Indicators at the County Level

We also analyzed two social problem indicators for the county: juvenile arrest rates and drug-related arrests. As expected, we found greater variability in the county juvenile arrest rates but the general pattern tracked the state rate between 1980 and 1995 (see Figure 10).

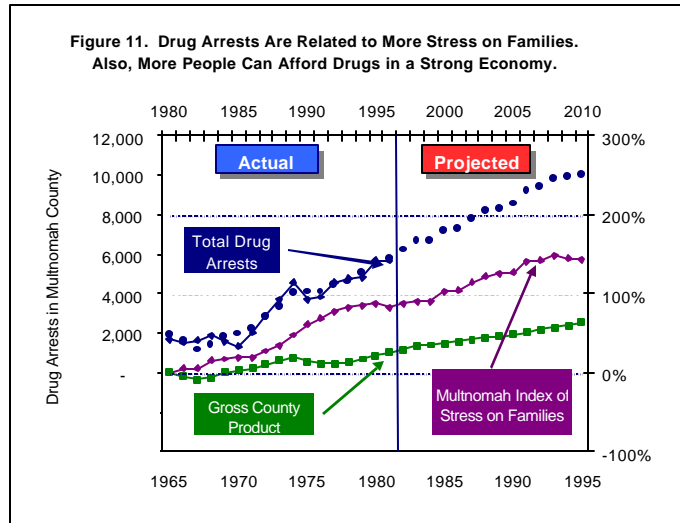
During this period the juvenile arrest rate was related to social capital — communities (relative cohort size), and social capital — families (index of stress on families) ($F_{2,13} = 10.33$; Multiple R = .78; R Square = .61). However, the county's juvenile arrest rate (shown as triangles) has been falling recently.

Because officials in Multnomah County have been particularly concerned about the increase in drug activity we also analyzed the number of drug-related arrests. Three variables explained the increase: economic growth (Gross County Product), social capital — communities (relative cohort size), and



social capital — families (index of stress on families composed of divorce rates and births to unwed mothers) ($F_{3,13} = 107.34$; Multiple R = .98; R Square = .96). Drug-related arrests increase, rather than decrease, in a strong economy supposedly because more people can afford drugs (see Figure 11). Less adult supervision and parental attention 15 years earlier were associated with the current increase in drug-related arrests.

We also analyzed the drug-related arrests separately for juveniles and adults. Juvenile drug-related arrests were associated with the 15 to 19 year-old cohort size and stress on families 15 years earlier ($F_{2,14} = 18.10$; Multiple $R = .85$; R Square = $.72$). Drug-related arrests for adults were associated with stress on families 20 years earlier ($F_{1,12} = 84.21$; Multiple $R = .94$; R Square = $.88$).



DISCUSSION

Macro-level indexes of social health have been developed for nations (Miringoff, 1995; Brink and Zeesman, 1997) and for states/provinces (Miringoff, Miringoff and Opdyke, 1996; Brink and Zeesman, 1997). In this study we developed a similar Index of Well-Being for the state of Oregon and for one of its large counties in the state's major metropolitan area. Our purpose was 1) to see if the divergence of economic and social conditions was also found in Oregon, 2) to determine if the Well-Being concept could be extended meaningfully to policy leaders at the county level, 3) to clarify the problem, 4) to determine what seems to be causing it, and 5) to develop recommendations for policy makers.

1. OREGON'S DIVERGENCE OF ECONOMIC AND SOCIAL CONDITIONS MIRRORS THE NATIONAL PATTERN

Although our Index of Well-Being was based upon a somewhat different set of economic and social factors, the general pattern of divergence for the state of Oregon (see Figure 4) was similar to the patterns reported for the United States (Miringoff, 1995) and Canada (Brink and Zeesman, 1997). Economic prosperity, as measured by growth in the sum of all goods and services produced in a region, no longer ensures improved social conditions. Therefore, policy leaders need indexes of social health or well-being in addition to the readily available macro-level economic indexes, such as the Dow Jones Industrial Average and GDP.

Indeed, data from this study run counter to a fundamental aspect of the Circle of Prosperity in Oregon's state strategic plan (see Figure 3). While the state's more diverse industries have created thousands of net new jobs annually for more than a decade, these employment opportunities did not reduce poverty and crime, as hypothesized. In spite of strong economic growth, we found no statistically significant difference in Oregon's poverty rate between 1980 and 1997. We did find strong, statistically significant correlations between economic growth (GSP) and the juvenile arrest rate and the overall reported crime rate but the relationship was the inverse of that predicted by the Circle of Prosperity. Better economic conditions were associated with more juvenile arrests and higher overall crime rates.

2. THE WELL-BEING CONCEPT CAN BE EXTENDED TO THE COUNTY LEVEL

In order to extend the well-being concept to the county level, we had to make some adjustments to the general methodology, such as the development of an estimate for the equivalent of GSP. Still, we found the same pattern of divergence between economic and social indicators (cf., Figure 9).

We were also able to apply the methodology for using indicators of economic expansion, stress on families and the loss of community to forecast the Well-Being Index and to analyze social problem indicators at the county level. While the same indicators of financial capital and social capital were typically selected by stepwise linear regression at both levels, there was often greater variability in the county data and therefore the R Square values were somewhat lower than the comparable figures at the state level.

One of the most interesting findings was that Multnomah County's juvenile arrest rate, which had followed the state trend between 1980 and 1995, moved away from the statewide average in 1996 and 1997. This seems to be the beginning of a new pattern, rather than noise in the data, because preliminary figures suggest that the official juvenile arrest rate for 1998 will be even lower.

Several hypotheses were suggested for Multnomah County's new pattern. First, there has been a national reduction in violent juvenile crime, particularly in America's largest cities, and the same pattern may be occurring in Portland. Second, a new Director of Juvenile Community Justice was appointed in 1995. She has changed policies and initiated new programs, such as targeting at-risk offenders to reduce recidivism. Third, housing prices in the county have been rising and therefore it is possible that many at-risk families are leaving the metropolitan area, as portions of the downtown area are gentrified. Fourth, the national labor shortage in our strong economy has forced employers to hire

more high school dropouts.⁴ Even though we found that the juvenile arrest rate had been increasing while unemployment rates were decreasing, it is possible that very low unemployment rates have reached at-risk families and have had an impact on social problem indicators, such as crime.

We did not have sufficient data to test these hypotheses but the information available to us suggests that none is the sole explanatory factor. However, the plausibility of these hypotheses implies that public policy can affect our general well-being and specific social problem indicators. We will return to this point in the section entitled “What Can We Do about It?”

CONCLUSION

Now that the methodological questions have been addressed we can return to the policy questions posed at the beginning of this paper. If we are in the midst of one of the longest periods of economic expansion, why don't we feel better about it? More specifically, why have some social conditions not improved and others gotten worse despite a remarkable turnaround in the state's economy?

3. WHAT'S THE PROBLEM?

The problem addressed in this paper is simply that the well-being of Oregonians has stagnated during a period of strong economic growth (see Figure 4). We don't feel better about this exceptional period of economic expansion because several of the Oregon's social health benchmarks have not improved and others have gotten worse.

4. WHAT'S CAUSING IT?

This study helps us understand why the Well-Being Index has stagnated. Simply put, increases in financial capital and better unemployment rates, which tend to raise the index, have been offset by decreases in social capital, which are dragging down the index. Here is our perspective.

Improvements in the economy, as reflected in real growth in the GSP, lead to more jobs and lower unemployment rates. Typically, periods of strong economic growth also lead to higher salaries, although that was not the case in the 1980s and early 1990s. With more jobs and higher salaries more people can own a home and provide a good education for their children, as well as enjoy their leisure time, travel, and entertainment.

⁴ National data indicate that high school dropouts have experienced the largest relative increase in their employment rate between 1993 and 1998 (Council of Economic Advisors, 1999: 106).

However, decreasing social capital reduces the well-being of the citizenry. Increasing juvenile arrest rates and several other social problems were associated with our indicators of the loss of community and more stress on families fifteen years earlier. We believe that this can be attributed to successive cohorts of children being raised with less adult supervision and parental attention than preceding cohorts.

The fading sense of community is reflected in the widespread loss of trust and neighborliness during the second half of the 20th century. In closer knit communities three or four decades ago, parents were more likely to know their children's friends and socialize with their parents. As a result, adults were more likely to intervene if they saw someone else's child getting into trouble. Today's more fragmented society is less likely to lead to this kind of community support and intervention is typically left to the authorities.

The size of the birth cohort is also relevant to the sense of community. When a birth cohort is relatively large, there are fewer adults in the community to mentor and supervise children outside the home.

Our children are also affected by another loss of social capital caused by increasing stress on families. The increase in the divorce rate and the percentage of non-marital births are indicators of family stress but stress is not restricted to single-parent families. Laurence Steinberg's (1996: 187) estimate that one in three parents is "seriously disengaged" suggests that children in many intact families are not receiving adequate parental attention. We believe the shape of the curve for the Index of Stress on Families shown in Figures 7 and 10 is probably reflective of the relative increase in stress on all families. With the rise in the divorce rate and the percentage of non-marital births coupled with the faster pace of life and less job security, it seems reasonable that the level of stress on American families in 1978 was twice as high as it was in 1965, and three times as high in 1991.

The following section of this paper relates our findings from the state of Oregon to the perspective described above.

Financial Capital

Oregon has experienced a remarkable period of economic expansion for more than a decade, which has produced strong job growth and low unemployment rates, but that is only half the picture. Average earnings for most Oregonians have not been keeping up with inflation and poverty rates have not declined.

Real Earnings Have Not Been Increasing and the Poverty Rate Has Not Declined

We found a statistically significant decline in Oregon's unemployment rate. However, strong economic growth has not had a similar impact on real earnings and poverty. For example, even though inflation-adjusted earnings have increased recently, the average is still below the 1975-79 level. Also, the poverty rate in Oregon has not declined. In other words, more people have jobs during this extended period of economic expansion, but the financial well-being of Oregonians has not improved much on average.

For the typical long-time Oregon resident the financial picture is even worse. *Oregon Shines II* indicated that tens of thousands of good jobs have been created in the 1990s, but companies have relied upon out-of-state recruiting to fill them (Kissler and Tryens, 1997: 29). For example, the private sector created over 100,000 professional and managerial jobs between 1986 and 1996, but the number of graduates from Oregon's colleges and universities did not increase. If Oregon's highest paying jobs are being filled disproportionately by new residents and inflation-adjusted average earnings have not increased, we can infer that real wages for long-time Oregon residents have probably declined.

The Increase in Social Problem Indicators Is Not Explained by Rising Poverty

Poverty is often identified as a central factor responsible for the increase in some social problems during the 1980s and 1990s. Indeed, data collected at the level of the individual tend to support the link to poverty. For example, those who commit domestic violence, child abuse, and crime are more likely to be poor.

However, the macro-level data do not support the linkage. For example, there was no statistically significant change in Oregon's overall poverty rate between 1980 and 1997, but there has been a significant increase in the juvenile arrest rate. The apparent discrepancy between the micro- and macro-level findings can be explained by the fact that criminals are more likely to be poor, but most poor people are not criminals.

It is, however, possible that the rate of children in poverty would be better than the overall poverty rate as a predictor of juvenile arrests, teen pregnancy, school failure, etc. fifteen years later. We were unable to test that hypothesis because data for the percentage of Oregon children living in poverty since 1965 are not available.

There are many good reasons for trying to reduce Oregon's overall poverty rate, but our findings suggest that one should not expect successful

efforts to result in fewer social problems. Clearly, some other factors are driving the changes in these social indicators. If it is not the economy or poverty, then what is it? Our findings suggest that the loss of social capital rather than the increase in the availability of drugs that has led to the increase in some social problems.

Social Capital

Our analysis of the intercorrelation matrix indicated that social problem indicators, like juvenile arrests, teen pregnancy and crime, did not get significantly better with improvement in economic indicators, like the Gross State Product, unemployment rate, real earnings, and poverty. In fact, some of the social indicators got significantly worse while the economy was growing. Rather than financial capital, this study links the rise in social problems to a loss of social capital leading to less adult supervision (measured by larger relative cohort sizes) and more stress on families leading to less parental attention (measured by a higher percentage of non-marital births and higher divorce rates).

As each generation grows up with less parental attention and adult supervision, more of our children are neglected and receive inconsistent discipline, which leads to aggressive behavior and poor school performance. As these children grow older, they can fall into a pattern of youth behavior that includes substance abuse, teen pregnancy, violence, and juvenile crime. Later in life this pattern can extend into adult crime and poor parenting, which perpetuates the cycle.

The linkage to a loss of social capital becomes clearer when the discussion moves from the macro-level Index of Well-Being to a specific social problem indicator, like the juvenile arrest rate. We were able to accurately estimate Oregon's past juvenile arrest rate by using only three variables: one indicator of adult supervision and two indicators of stress on families. Then, using those three variables (i.e., the relative cohort size, the divorce rate, and the percentage of non-marital births for a given year), we developed a forecast for the juvenile arrest rate.

We estimated that Oregon's juvenile arrest rate will rise from 65 per 1,000 in the year 2000 to 76 per 1,000 by 2010. Currently there are approximately 50,000 juvenile arrests each year in Oregon. Instead of reducing that number to approximately 30,000 in the year 2010, as indicated by the Oregon Progress Board's benchmark target, the forecast number would increase to almost 70,000 in 2010.

The Loss of Community

We started with three measures of the loss of community: 1) relative cohort size, 2) the belief that most people can be trusted, and 3) the extent to which people socialize with their neighbors. All were correlated with the juvenile arrest rate and the overall crime rate. However, the variable that explained more of the year-to-year variance was the relative cohort size.

Relative Cohort Size

Like O'Brien, Stockard, and Isaacson (1999), we used the number of 15 to 19 year-olds as a percentage of 15 to 64 year-olds as our measure of relative cohort size. Inverting the formula gives us the number of adults per juvenile. We assumed that when there are more adults per child, as there will be for the next decade, there will be more adults to provide supervision.

If, however, society is moving towards a culture of fragmentation, individualism and social atomization, then more adults may choose not to serve as mentors and other positive influences in the lives of other people's children. Policy leaders interested in improving the opportunities for our children will, therefore, want to increase the level of public awareness and create incentives for adults to get involved with youth.

Trust and Neighborliness

Neither of our broad indicators of trust and neighborliness was selected by stepwise linear regression, even though both were related to our Index of Well-Being. This should not, however, be seen as a rejection of the basic thesis put forward by Putnam (1995) or Fukuyama (1999). Rather, our three indicators of Social Capital — Communities are correlated with each other and seem to be tapping a common social phenomenon. Relative cohort size may have been a somewhat better statistical predictor because the data are more reliable.

More Stress on Families

Time for Family

A major stress facing families today is simply the matter of time, or the lack thereof. With the changing nature of the family — the increase in divorce, more women entering the work place, and the greater mobility of Americans — the family has been stretched to its limits. The heart of the problem is that jobs and families are changing faster than public and corporate institutions.

A 1998 study entitled the "National Study of the Changing Work Force" illustrates the trends facing American workers today. The Family and Work Institute (1998) found that:

- People are working more hours than they were in the past. The average workweek for fathers has risen by 3 hours over the past 20 years. The average for mothers is up 5 hours per week.
- One-fourth have felt emotionally drained by their jobs often or very often over the past three months. More than one-third have often felt "used up" at the end of the workday.
- More than three out of four married employees have spouses who are also employed — an increase from 66 percent to 78 percent over the past 20 years.
- Twenty-six percent of workers care for an aging parent or relative.

Fuchs and Reklis (1992) have estimated that the demands of work and the increase in single parenting have resulted in 10 to 12 fewer hours per week spent with children. It should come as no surprise then that about two-thirds of Americans would prefer to take a salary reduction in order to get more time off (Family Resource Coalition, 1992; Family and Work Institute, 1998).

Because time for family is central to the concept of parental attention we would have preferred a direct measure of parental involvement or "connectedness" with children but we did not have access to a longitudinal data series. Therefore, we settled for two indicators of stress on families: the percentage of births to unwed mothers and the divorce rate. In spite of the limitations of these measures, these factors explained much of the year-to-year variance in the Index of Well-Being and various social problem indicators. Therefore, we will discuss the research by others that suggests why these factors were such powerful predictor variables.

It is important to remember, however, that the level of analysis in this study is the state (or county) and not individuals. Therefore, we cannot prove or disprove the hypothesis that being born to unwed parents or being the child of divorced parents increases the odds of school failure, teen pregnancy, substance use, or juvenile delinquency. We can only conclude from our data that divorce and non-marital births are risk factors for society as a whole.

However, other studies using individual data have shown that children of single parents face greater risks for poverty and poor social outcomes. For example, Carol Emig (1998: 44) reports that almost half of the children living in female-headed households in 1996 were poor, compared to ten percent of children in married-couple families — a difference that has persisted for almost three decades.

Driscoll, Hearn, Evans, Moore, Sugland, and Call (1999) found that unwed mothers were much more likely to have low household incomes and to be on welfare, particularly those with more than one child. They also reported that children raised by a single mother typically complete fewer years of education than the children of two-parent families. The negative effects are greatest for children who live in single-parent households during pre-school years (Klein and Beller, 1998).

Amato (1993) reported the results from a meta-analysis of 92 studies of the effects of divorce on children. Parental divorce was associated with negative outcomes in academic achievement, conduct, psychological adjustment, self-esteem, and social relations. Amato (1993) also reported findings from another meta-analysis of 33 studies of the effects later in life. Adults who experienced parental divorce as children, as compared with those from continuously intact families, had poorer psychological adjustment, lower socioeconomic attainment, and greater marital instability. He attributes these negative outcomes primarily to interparental conflict, which starts before the actual divorce proceedings and may actually result in less stress for children if they have enough positive assets in their lives to offset the loss of contact with the noncustodial parent, the continuing exposure to interparental conflict, a decline in standard of living, etc.

Births to Teen Mothers in the United States

A great deal of social research and many policy initiatives have been directed at curbing teen births (Camarena, Minor, Melmer, and Ferrie, 1998; Solomon, Liefeld, 1998; Emig, 1998; Halperin, 1998). Summarizing the current research on teen mothers, Joanna Gregson Higginson (1998) stated “the children of teenage mothers are more likely than other children to die as infants, grow up in poverty, get into trouble at school, drop out of school, become criminals if they are boys, and become adolescent parents themselves if they are girls.”

Teen mothers generally experience great stress — struggling with their own psychological development and financial difficulties while learning to be a parent. Solomon and Liefeld (1998) noted that teen mothers are caught in an ambiguous social status between child and adult. Therefore, they work to demonstrate that they are competent parents in order to prove that they have successfully made an early transition to adulthood.

Births to Older Unwed Mothers in the United States

Fortunately, researchers at the National Center for Health Statistics (Ventura, Mathews, and Curtin, 1998) have reported a decline in the teen birth rate in the 1990s. Nevertheless, teen pregnancy is still very important because many older unmarried women having a subsequent child, first started having children as teenagers (Driscoll et. al., 1999). However, our attention must now

go beyond teen pregnancy because most non-marital births in the United States occur to women in their twenties and women over the age of 25 account for an increasing proportion of non-marital births (Driscoll et. al., 1999).

In contrast with teen mothers, relatively little has been written about older unwed mothers in the United States and almost no information is available on unwed mothers in Oregon. Therefore, we analyzed the Oregon Health Division's 1997 birth file, which contains information about the parents of all babies born in the state.

Births to Older Unwed Mothers in Oregon

Data published by the Oregon Health Division (1998) indicate that one-third of the state's unwed mothers are teenagers, one-third are between 20 and 24, and another third are over the age of 24. While there has been some reduction in teen births, there has been a sharp increase in the number of births to older unwed mothers. Specifically, the number of births to unwed mothers aged 20 to 24 doubled in the 1990s and births to unwed mothers over 25 increased 2.5 times.

The unwed mothers aged 20 and over were similar in many respects to the teen unwed mothers — not well educated and poor. More than one-fourth of these older unmarried mothers (27%) had not completed high school. Only 6% had completed at least four years of college, as compared with 29% of the married women. In short, very few fit the “Murphy Brown” stereotype.

Public assistance paid for 62% of the births to older unwed mothers, as compared with 18% of older married women. This was not the first child for 60% of the older unwed mothers. Forty percent of the older unwed mothers were having a first child; 30 percent a second child, and the remaining 30 percent already had two or more children.

Twenty percent of the older unwed mothers provided no information about the biological fathers. Information from those who provided information indicates that 27% of the biological fathers had not completed high school, as compared with 12% of the married fathers. Eight percent of the biological fathers associated with older unwed mothers were college graduates, as compared with 33% of the married fathers.

Are Unwed Mothers to Blame for Juvenile Crime?

The answer is “No.” We found births to unwed mothers and the divorce rate explained much of the year-to-year variance in Oregon's juvenile arrest rates. This strong statistical relationship does not, however, mean that unwed and divorced mothers are the cause of the increased juvenile arrest rate.

First, as indicated above, our data are for the state as a whole and therefore we are unable to draw conclusions about individual mothers and their children. While the research cited above (Amato, 1993; Driscoll et. al., 1999, Emig, 1998) suggests that children of single parents are at greater risk for poverty and poor social outcomes, these studies were not designed to establish cause and effect.

Second, our methodology uses linear regression, which is based upon correlation. Therefore, we cannot determine causality, only identify statistically significant relationships.

Third, our data suggest that the children of unwed mothers could not be solely responsible for Oregon's rising juvenile arrest rate 15 years later. For example, the number of non-marital births in Oregon increased from 3,825 in 1976 to 6,384 in 1981 (2,559), while the divorce rate remained unchanged. Fifteen years later the number of juvenile arrests increased from 37,035 in 1991 to 50,720 in 1996 (13,685). If only the children of unwed mothers were responsible for that increase, then each of them would have been arrested more than five times on average as 15 year olds. It is far more likely that most of those additional arrests were juveniles born many years earlier into two-parent families.

Rather than being the causal factor, we believe that the percentage of non-marital births is merely an indicator of stress on families, which contributes to less parental attention. While single mothers and fathers may find it more difficult to provide as much parental attention as two-parent families, many intact families also fit the profile of Laurence Steinberg's (1996) "disengaged parents."

Fourth, procreation requires both males and females. Therefore, we prefer the term "non-marital births" to the commonly used "births to unwed mothers" or the even more offensive term "illegitimate births," which was widely used in the past. The term "births to unwed mothers" ignores the biological fathers and implies that they are somehow absolved of financial responsibility or continued involvement in their children's lives.

To the contrary, Frances Fukuyama (1999) believes that men are to blame for these negative social consequences. He argues that the norm of male responsibility for the women they impregnated and the resulting children weakened during the second half of the 20th century. After analyzing trends in several countries he wrote,

The decline of nuclear families in the West had strongly negative effects on social capital and was related to an increase in poverty for people at the bottom of the social hierarchy, to increasing levels of crime, and finally to declining trust. But pointing to the negative consequences for social capital of changes in the family is in no way to blame women for these problems...The most important shift in norms was in the one that dictated male responsibility for wives and children.

Divorce

Between 1965 and 1975 divorce rates in the U.S. doubled and then leveled off. Some argue that the changing role of women in society was one reason for the increase in divorce. With the rise of the women's movement in the early 1970s women took an independent lead in their lives, joining the work force, and, in some cases, exiting unsatisfying marriages.

Others point to the availability of “no fault” divorces and the changing attitudes of Americans toward divorce. For example, Amato and Rogers (1999) attributed the increase in divorce to the spread of excessive individualism, which has weakened commitment to a variety of institutions, including marriage. They found that couples who divorce saw it as a viable option before they got married, providing an exit strategy should they ever become unsatisfied with the quality of the relationship. Amato and Rogers (1999) suggest that most Americans continue to value marriage but they invest less time in their marriages and make fewer attempts to resolve marital disagreements. Moreover, these weakened marital relationships also affect the quality of the parent-child relationships (Shek, 1998).

Shifflett and Cummings (1999) suggest that divorce, which is often caused by interparental conflict, impacts children negatively after the divorce. For example, they note that children of divorce have significantly more mental health problems than children from intact families — with the rate of clinically significant mental health problems as much as 300% higher. They suggest, however, that parents can learn ways to prevent, or at least minimize, the negative impacts of divorce for their children.

Drugs

Our measure of the prevalence of drugs in society (i.e., the percentage of drug-related arrests) was correlated with the juvenile arrest rate and the overall crime rate. However, it was not chosen by stepwise regression as one of the

variables explaining variations in the well-being index. Our indicators of financial and social capital were better predictor variables.

5. WHAT CAN WE DO ABOUT IT?

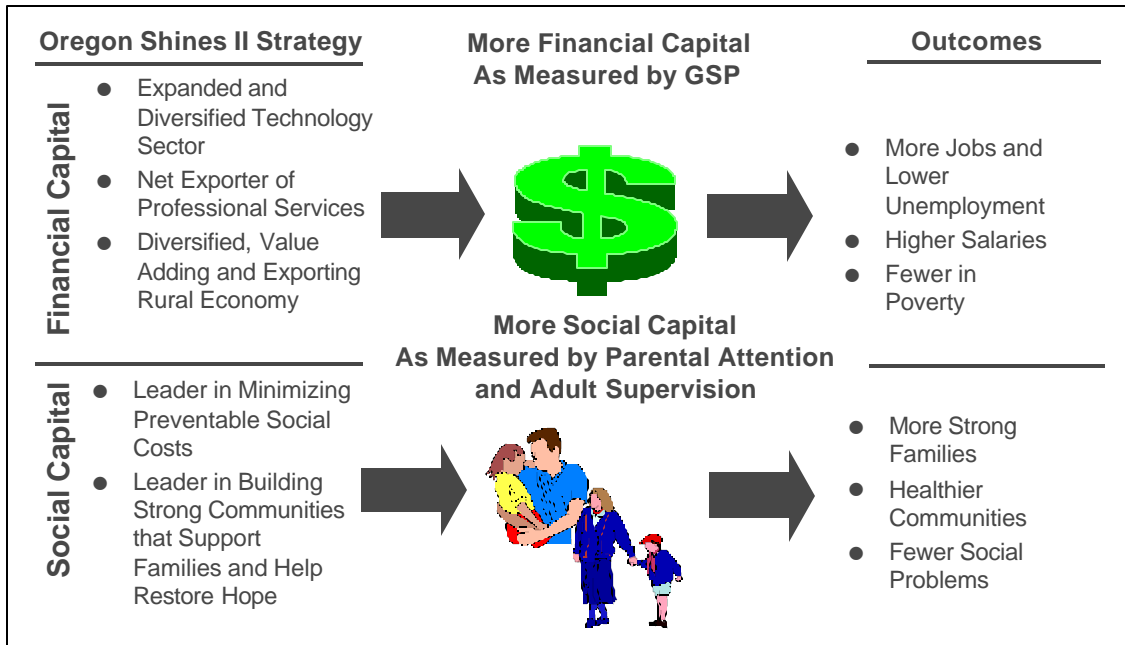
Both economic and social factors affect the Well-Being Index. Therefore, policy makers wishing to improve the well-being of Oregonians must address issues on two fronts. First, they must take steps now to ensure that Oregon is well positioned for a knowledge-based economy so that financial capital will continue to increase. Second, policy makers must help increase available social capital by strengthening communities and families.

Harold Howe II (1998: 171), a former chair of the William T. Grant Foundation, related social well-being to the flow of a river. It is easy to focus on the youth who are struggling in surprisingly deep and turbulent waters, many of whom will be lost without immediate help. Unless we focus on prevention for our younger children, however, “we will not have done our job as caretakers of the river and stewards of the future.”

The importance of prevention is highlighted by the very nature of this study, which points to the impact of events occurring 15 years earlier on current social conditions. The high statistical relationships, however, might lead one to conclude that nothing can be done because our social health for the next decade is predetermined by events that have already taken place. However, the data for Multnomah County showing that juvenile arrests have been dropping recently suggest that policy matters. Therefore, we offer the following broad outline for increasing financial and social capital for economic growth, healthy communities and strong families.

To Increase Financial Capital

Our state strategic plan, *Oregon Shines II*, noted that the economy was in transition to more of an economy of the mind. Therefore, policy makers must ensure that Oregon's economy is well positioned for 21st century competitiveness and that Oregonians have an education for the Information Age. In short, we want more good jobs to be created here and Oregonians to be educated for good jobs anywhere.



***Oregon Shines II* described two strategies for the economy. To create good jobs for the 21st century we will need an expanded and more diversified technology-generating sector; a professional services sector that is a net exporter; and a rural economy that is diversified, valued adding, and exporting. The plan assumes that this will increase financial capital, create jobs, lower unemployment rates, increase salaries, and reduce the poverty rate (see Figure 11). To address the education issue we must continue to raise school achievement standards and increase the percentage of Oregonians who have more advanced levels of education so that they will be prepared for work in the Information Age.**

To Increase Social Capital

Because economic and social conditions have diverged policy leaders cannot focus solely on the economy. To raise the Well-Being of Oregonians Index we must also offset the loss of social capital, especially declining levels of parental attention and adult supervision since the 1950s and 60s. The result of what Fukuyama (1999) calls the “Great Disruption” is not only the loss of community and more broken homes but also too many children who receive inconsistent discipline and inadequate parental attention; too many children in homes plagued with substance abuse and domestic violence; too many children who are abused and neglected.

It should come as no surprise to us that sweeping social change over the past three or four decades has taken its toll on our children. The increase in disengaged parents and the corresponding reductions in parental

attention/connectedness have produced a series of poor social outcomes that are holding down the well-being of our society today.

While little can be done to push back the tidal wave of social change, steps can be taken to increase the sum of all positive assets in our children's lives. If more parents were engaged in their children's lives and if more adults served as mentors for the children of others, the incidence of poor social outcomes would eventually be reduced. While there can be no long-term reduction without attention to upstream factors, early intervention cannot be the sole focus of our efforts because it addresses only a portion of the continuum. Therefore, we conclude that policy makers should develop policies and programs directed at: 1) increasing the number of engaged parents, 2) reducing non-marital births and encouraging responsible fathers 3) emphasizing early childhood intervention, and 4) expanding programs that target at-risk juveniles.

Increasing the Number of Engaged Parents

Laurence Steinberg (1996: 130) related a story about a national organization that sponsored a contest inviting teenagers to produce their own public service announcements for television. These PSAs

could deal with any subject that the teenager felt deserved widespread public broadcast, including such topics as drug or sex education, AIDS awareness, conflict management, the importance of staying in school, and so forth. Hundreds of entries were submitted, from all over the United States. What was the most popular theme? By a wide margin, the most popular message in these spots written and produced by teenagers was one aimed not at their peers, but at parents. The message was devastatingly sad in its simplicity: the adolescents used the public service announcements to remind parents to take time to talk to their teenagers.

Today's workers are under increasing pressure and would like to have more time to spend with their families. The Family and Work Institute (1998) concluded that jobs have become less secure, more time-consuming, and more hectic. Therefore, we believe that the business community needs to play a more active role in helping families and communities. Fore (1998) argued that in order for "companies to have a long-term supply of happy, dedicated and engaged employees they need to make some commitments to their staff." One successful strategy has been to provide flexible work environments.

Also, the Family Resource Coalition (1992) noted that communities with “the strongest business response to work-family and child care problems . . . are the communities in which government has built the strongest infrastructure.” Public government working in concert with private business can help to develop a flexible, family friendly workplace.

Reducing Non-Marital Births and Encouraging Responsible Fathers

The studies cited by Driscoll et. al., (1999) and Emig (1998) suggest that being born to an unwed mother is a common route to childhood poverty and greater risk for poor social outcomes. Of course, these findings do not mean that all children born to unwed mothers will become juvenile delinquents, school dropouts, etc. Nor are they the only ones who will come into contact with the authorities. Driscoll et. al. (1999) put it well in saying, “Although most children of single mothers become well-adjusted, productive adults, as a group they are more likely to experience poor outcomes, such as lower educational attainment and more behavioral problems, than other children.”

This increased likelihood constitutes an important risk factor for society. Therefore, we believe that policy leaders must discuss the trends and the human costs associated with the sharp increase in the percentage of non-marital births (see Figure 8). It will be an uncomfortable debate that must incorporate the rights of parents and the costs to society but we must not avoid the topic.

We recognize, on the one hand, that relatively little has been published on the social consequences of non-marital births to mothers who are no longer teenagers. Often inferences are drawn from research on single parenting but this includes those who were not married at the time of the birth with those who were married but subsequently divorced. Clearly, this is a topic deserving of further study because anecdotal evidence suggests that many single parents in professional and managerial jobs are fully engaged in their children's lives.

On the other hand, our analysis of the Oregon Health Division's birth file indicates that there are very few who fit the Murphy Brown stereotype. Rather, most unwed mothers are poor, and poorly educated, and most of those who are no longer teenagers already have children at home. The sharp growth in the latter category is, therefore, a major source of social concern.

Some will argue that poor social outcomes associated with non-marital births must be accepted as the costs of a free society. We do not agree. For us, the costs to the children, to their children, and to society are too great to accept blindly. After studying this matter and reading case files of children in foster care, we have come to the conclusion that policy makers should extend programs that have successfully reduced teen pregnancy to unmarried women over the age of 19. We realize, of course, that it will be an uncomfortable

conceptual shift from trying to reduce the number of babies having babies to attempting to influence the choices made by adults. While this will surely lead to a conflict of values, the discussion is long over due.

In addition to attempting to reduce the number of non-marital births, efforts must be made to sharply increase the number of biological fathers who assume responsibility for their children. Policy leaders might consider a strategy for unwed fathers that parallels current efforts to pursue "deadbeat dads" who do not fulfill their court-ordered financial obligations to their children after a divorce.

Even if policy leaders decide to develop strategies for reducing the number of children born to single mothers and increase the number of biological fathers assuming responsibility for their children, they will need to be extraordinarily patient. We would expect the early impact to be on reduced incidence of child abuse and improved school success. However, the impact on juvenile crime would not occur until after 2015.

Emphasizing Early Childhood Intervention

Because many children have already been born into homes with inadequate parental attention society must increase the number of adult mentors to compensate. Fortunately, the cohort size will be shrinking over the next 10 to 15 years, which means that there will be relatively more adults per child. As a society, we will have the capacity for more adoptions, more foster parents, more scouting leaders, etc. If every adult whose children are grown would donate time or money to non-profit agencies that address the needs of our youth, there could be a substantial increase in the Well-Being Index with a corresponding reduction in juvenile crime, teen pregnancy, etc.

The costs of early intervention programs can be very high but risk factors can be used to target at-risk households. Indeed, intervention during the first years of a child's life has been shown to have both short-term and long-term benefits. For example, David Olds and his associates at the University of Colorado (Olds, Hill, Mihalic and O'Brien, 1998) have shown that prenatal and infancy home visits had important lasting effects in comparison to a control group:

- 79% fewer verified reports of child abuse or neglect,
- 31% fewer subsequent births,
- 30 months less receipt of AFDC payments,
- 44% fewer maternal behavioral problems due to alcohol and drug abuse,

- 60% fewer instances of running away on the part of the 15 year-old children, and
- 56% fewer juvenile arrests.

Therefore, policy leaders should encourage public/private partnerships focusing on early childhood intervention, such as Home Visitation, Healthy Start, Head Start, Birth to Three, the Relief Nursery, First Steps, etc. The most effective programs work with the parents, the children, teachers, and peers during the first eight years of life.

The public sector has an important role to play and government's share of the costs of such intervention programs will surely be high. Social service budgets have not kept pace with the increasing stress on families and the greater complexity of today's cases. However, prevention and early intervention prior to age eight are more cost effective than dealing with the social consequences of rising juvenile crime, drug-related arrests, etc. later in life (Kumpfer and Alvarado, 1998). The fundamental question is whether we will have the will to invest in prevention when faced with the immediacy of today's crisis cases at our doorstep.

Expanding Programs That Target At-Risk Juveniles

We cannot, however, abandon our youth. A comprehensive strategy must also include prevention programs directed at older children and juveniles. Such programs include focused enforcement, education, mentoring, structured after-school activities, treatment services, etc. These programs can be effectively coupled with graduated sanctions intended not only to demonstrate that there are serious consequences for delinquent behavior but also to help youth develop positive, pro-social attitudes and behaviors.

summation

We believe that well-being is a function of both financial and social capital. This study suggests that our well-being is being weighted down by social problems that have been increasing in spite of strong economic growth. The increase in these social problems can be attributed to successive generations being raised with less parental attention and adult supervision. They can be addressed by increasing available social capital — the number of positive assets in children's lives.

Earlier in this decade the National Commission on Children (1991: 88) declared that solutions that increase available social capital "will require creative public policies and private sector practices, thoughtful investments of public and private resources and significant commitment of individual time and attention to the needs of children and their families." Those words are as true

today. Together community, business, and political leaders must work to increase financial and social capital for economic growth, healthy communities and strong families.

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Appendix

Table 1

Sources and Definitions of Variables

Variable	Definition	Source	Missing Values	Converted To Growth Rates	Inverted Negative Factor
Financial Capital					
GSP (real GSP per capita)	Sum of all goods and services made in Oregon from 1980 to 1997. All figures in 1997 dollars using Portland CPI-U. Constant dollar figures divided by state population.	Economic Development Department – Art Ayre Earnings estimates from OEA's Dec. 1998 forecast. for 1998 thru 2005. Figures for 2006 thru 2010 were linear extrapolations. GSP = Earnings / .60.	1997	X	
Unemployment Rate	Benchmark #18	Oregon Employment Department – Jeff Hannum		X	X
Average Annual Earnings	Benchmark #15	Oregon Employment Department – Jeff Hannum		X	
Poverty Rate	Benchmark # 57. % of Oregonians below the Federal poverty level	www.census.gov/hhes/poverty/histpov/hstpov21.html		X	X
Social Capital					
Actual cohort of 15 to 19 year-olds	Oregonians aged 15 to 19 divided by the number aged 15 to 64	U.S. Census Bureau and PSU Center for Census and Population Research			
Births to Unwed Mothers (lag 15)		Oregon Health Division Vital Statistics Annual Report			
Divorce Rate	# of divorces divided by 3 of marriages in the same year	Oregon Health Division Vital Statistics Annual Report			
People can be trusted	% of Americans who agree with statement "People can be trusted"	General Social Survey www.icpsr.umich.edu/gss/trend/trust.htm			
Socialize with neighbors	% of Americans who never spend an evening with neighbors or only once a year	General Social Survey www.icpsr.umich.edu/gss/trend/socommun.htm			X
Drugs					
	% of all arrests in Oregon that were drug-related	Law Enforcement Data System (LEDS)			
Well-Being of Oregonians Index	Sum of growth rates for six variables (unemployment, average earnings, poverty, the juvenile arrest rate, teen pregnancy rate and overall crime rate) divided by 6	Computed for this study by the authors			
Social Problem Indicators					
Juvenile Arrest Rate	Benchmark #65. # of juvenile arrests divided by Oregon population under age of 18	Law Enforcement Data System			X
Teen Pregnancy Rate	Benchmark #43. Sum of live births and induced abortions among teens divided by the number of females aged 10-17.	Oregon Health Division Vital Statistics Annual Report			X
Overall Crime Rate	Benchmark #64. # of crime reports divided by Oregon's total population	Law Enforcement Data System			X

Table 2
Raw Data

Table 3
Intercorrelation Matrix

Variable Name	Financial Capital				Social Capital					Drug-Related	Social Problem Indicators		
	Adjusted GSP	Unemp Rate	Earnings	Poverty Rate	Cohort Size	Births to Unweds	Divorce Rate	Neighbors	Trust		Juvenile Arrests	Teen Pregnancy	Crime Rate
Adjusted GSP	1.00	.91 ***	.61 **	.53 *	.68 **	-.83 ***	-.89 ***	-.93 ***	-.81 ***	-.78 ***	-.75 ***	.36	-.65 **
Unemp Rate	.91 ***	1.00	.42	.59 **	.63 **	-.60 **	-.84 ***	-.77 ***	-.70 ***	-.72 ***	-.58 *	.12	-.79 ***
Earnings	.61 **	.42	1.00	.00	.49 *	-.42	-.37	-.51 *	-.28	-.34	-.17	.56 *	-.21
Poverty Rate	.53 *	.59 **	.00	1.00	.28	-.27	-.49 *	-.42	-.47 *	-.38	-.32	-.17	-.52 *
Cohort Size	.68 **	.63 **	.49 *	.28	1.00	-.59 **	-.84 ***	-.71 ***	-.44	-.26	-.31	.74 ***	-.45
Births to Unweds	-.83 ***	-.60 **	-.42	-.27	-.59 **	1.00	.83 ***	.92 ***	.83 ***	.71 ***	.89 ***	-.48 *	.36
Divorce Rate	-.89 ***	-.84 ***	-.37	-.49 *	-.84 ***	.83 ***	1.00	.90 ***	.76 ***	.64 **	.73 ***	-.45	.62 **
Neighbors	-.93 ***	-.77 ***	-.51 *	-.42	-.71 ***	.92 ***	.90 ***	1.00	.81 ***	.71 ***	.81 ***	-.47 *	.47 *
Trust	-.81 ***	-.70 ***	-.28	-.47 *	-.44	.83 ***	.76 ***	.81 ***	1.00	.70 ***	.83 ***	-.12	.47 *
Drug-Related	-.78 ***	-.72 ***	-.34	-.38	-.26	.71 ***	.64 **	.71 ***	.70 ***	1.00	.76 ***	.03	.65 **
Juvenile Arrests	-.75 ***	-.58 *	-.17	-.32	-.31	.89 ***	.73 ***	.81 ***	.83 ***	.76 ***	1.00	-.16	.44
Teen Pregnancy	.36	.12	.56 *	-.17	.74 ***	-.48 *	-.45	-.47 *	-.12	.03	-.16	1.00	-.07
Crime Rate	-.65 **	-.79 ***	-.21	-.52 *	-.45	.36	.63 **	.47 *	.47 *	.65 **	.44	-.07	1.00

All negative factors (e.g., poverty, juvenile arrests, teen pregnancy) were inverted. Therefore, a positive correlation of .53 between GSP and the poverty rate means that the poverty rate improves a GSP increases.

* $p < .05$

** $p < .01$

*** $p < .001$

Thursday, May 20, 1999

9:14 AM