Health Insurance Coverage
Among
Small Rural and Urban Businesses

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**HEALTH INSURANCE COVERAGE
AMONG
SMALL RURAL AND URBAN BUSINESSES**

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Working Paper #1

May 1994

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EXECUTIVE SUMMARY

The question of whether and how to require employers to sponsor and pay for health insurance coverage for employees has become a central point of debate in health care reform. Although the employer mandate question has engendered substantial controversy and discussion, its impact on rural businesses and communities has not been widely assessed.

This paper uses information on health insurance coverage derived from a survey of small business owners in Maine, to compare features of rural and urban small businesses which may be related to their capacity or willingness to offer a health benefits plan. Two multivariate models are used in the analysis. A logit model is used to test the effect of rural location on the likelihood of an employer offering coverage, when controlling for other business characteristics. In the second analysis, a linear regression model is used to test the explanatory power of rural location on the proportion of the workforce participating in the company's insurance plan, when other employee characteristics are taken into account.

Results indicate that small rural firms are only about 68 percent as likely as their urban counterparts to offer a health benefit plan to their employees. Even after controlling for differences in size, age, employee turnover, industrial type and workforce composition, the odds of a rural firm offering coverage (relative to urban firms) rises only to 70 percent. These results indicate that small rural firms face significant barriers to coverage unaccounted for by commonly understood risk factors. When asked to rank reasons why health insurance was not offered, rural business owner respondents were more likely to indicate concerns with the lack of good information, problems administering the plan and the fact that the company had been turned down because it was too small.

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Among firms with health insurance plans in place, fewer than half the employees obtain health benefits coverage through that plan. Overall, employee participation rates are

lower in rural (44.3 percent) than urban firms (52.0 percent). This difference can be largely explained by the high proportion of seasonal workers in rural businesses, most of whom do not participate in health coverage plans. When workforce composition and other factors are taken into account, rural location does not affect employee participation.

This analysis of small businesses suggests that small rural firms face significant barriers to employer sponsorship of insurance coverage unaccounted for by commonly understood risk factors. Further, even if rural employers offered health insurance at a rate equal to that among urban small businesses, the rate of coverage for individual rural workers would remain lower due to the larger percentage of part time and seasonal workers in rural businesses. Policy-makers will need to consider the additional technical assistance, subsidies, marketing and other manpower needs of rural areas, in order to bring them into a universal, employerbased system.

INTRODUCTION

Under the Clinton Administration's proposal for health system reform, small businesses will face increased responsibilities for financing and sponsoring health coverage for their employees. While this aspect of the proposal has engendered substantial controversy and discussion, its impact on rural businesses and communities has not been widely assessed. In this paper, we use information on health insurance coverage derived from a survey of small business owners in Maine, to compare features of rural and urban small businesses which may be related to their capacity or willingness to offer a health benefits plan. Our database allows us to consider three different constellations of variables that may be contributing to the extent of coverage (or non-coverage) in the small business workforce: firm attributes such as size and location; the characteristics of the workers within the participating firms; and the employers' self-reported reasons for not offering coverage. In this analysis we measure differences in rates of coverage among urban and rural small businesses, and evaluate these three sets of characteristics for their contribution to the residential disparities.

Some of the factors contributing to medical indigence in rural areas are well documented. Rural areas have high poverty and unemployment rates (U.S. Department of Commerce 1992). Either because of informational and access barriers, a higher proportion of intact families, or cultural resistance to government "welfare" programs, rural participation in Medicaid is lower than in urban areas (Wilensky and Berk 1 982, Rowland 1 989). Conversely, higher proportions of the population have individually-purchased policies in rural areas than elsewhere (Short 1989, Rodgers 1991, Frenzen 1 993a).

The income, categorical, and attitudinal barriers faced by the working poor would be eased by the passage of a universal entitlement plan such as that proposed by the Health Security Act. First, and most importantly, this proposal increases federal assistance beyond

the current categorical eligibility criteria of the Medicaid program. In addition, the proposed development of Health Alliances would assure that all individuals in a region, whether sponsored by an employer, subsidized by the government, or purchasing an individual policy, would choose from among the same health plans,[1] a feature which could remove some of the stigma associated with participation in current welfare-based state or federal programs for the medically indigent. However, because the primary mechanism that the Health Security Act uses to expand health benefits coverage is an employer mandate, it is important to assess whether rural areas face region-specific barriers to insurance expansion among small businesses.

An assessment of residential differences in health insurance coverage must recognize that the situation is fluid and dynamic. A discrepancy in insurance coverage between urban and rural areas, observed in the 1 970s and 80s, has been narrowing. While metropolitan and non-metropolitan rates were 86 percent and 83.8 percent, respectively, in 1987, by 1991, they were less than a percentage point apart (Frenzen, 1 993b). This narrowing of the gap has resulted from a decline in small group coverage in urban areas while rural areas have held relatively constant (Frenzen, 1 993b). Although the national difference in rural and urban rates of insurance coverage has narrowed, there continue to be significant differences within and across states. These regional variations and shifting temporal trends add to the confusion about the identification and interaction of factors contributing to low coverage rates among urban and rural small firms. It is not clear whether urban small firms are becoming more like rural firms, or whether these sectors face differing, yet dynamic, situational barriers.

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[1] Employees of businesses of over 5,000 workers are an exception to this provision. Their employers may choose to participate in the Health Alliance plans, or to provide health benefits directly to their employees through a self-funded insurance plan. Benefits must meet the minimum level specified by federal law for the Health Alliance plans.

One possible explanation for lower rates of insurance sponsorship among rural employers is that factors shown to be associated with lower rates of employer-sponsored benefit plans have a higher prevalence in rural areas than in urban areas. According to this hypothesis, the geographic differential might be explained largely by such factors as size, business age, industrial category, employee turnover, workforce demographic characteristics and employment characteristics. If these measurable factors cannot explain urban/rural differences, then one might conclude that rural businesses face some unique barriers as yet unidentified, that stand in the way of expanded coverage. The implications of these barriers for successful implementation of a universal coverage initiative that relies on employer-sponsored coverage may be significant.

The rate of coverage among employed persons is not solely a function of whether a business offers a plan. Disparities in coverage in rural and urban areas might also be explained, in part, by differing rates of employee participation. If, for example, rural small businesses have many more part-time workers than urban businesses, a smaller proportion of their workforce may benefit from an employer-sponsored plan, thus contributing to overall uninsurance rates in the area. The contribution of both employer and employee characteristics to rates of coverage among small businesses is explored below.

PRIOR RESEARCH

Prior research has shown a strong and consistent association between business size and the likelihood of offering health coverage benefits (HIAA 1 990; NFIB 1 990; Long & Marquis 1993). This relationship holds even among the smallest size of firms. Businesses of two to five employees are far less likely to offer coverage than businesses of ten which, in turn, have coverage rates below businesses of eleven to twenty workers (McLaughlin &

Zellers 1 992). There is also prior substantiation that rural, or non-metropolitan, firms have lower rates of coverage than urban firms (Frenzen 1 993b).

A number of factors, identified both by observation of insurance company underwriting practices and by empirical analysis of population and business survey data, have been shown to contribute to low coverage rates among small business employees. Because of the high administrative and marketing costs associated with the small group market, insurers charge up to forty percent more to small groups than to large groups for equal coverage (GAO 1 990). Insurers also place more stringent requirements on small groups, frequently requiring, for example, that employers contribute all, or a large share of the premium cost, rather than simply making a policy available to workers at their own cost (Zellers, McLaughlin & Frick 1 992). In addition, individuals within small groups face age/sex/health status-adjusted premiums, and must submit to and pass individualized health screens (Butler & Kilbreth 1991). Finally, insurance industry "red-lining" results in denial of coverage to many small businesses due to insurance industry perception of risk associated with their occupation. Among the types of businesses denied coverage are: bars and taverns (high risk occupation and high employee turnover); flower shops and beauty salons (assumed high homosexual employment and fear of AIDS-related claims); and physician offices (high rate of claims) (Zellers, McLaughlin & Frick 1 992). These exogenous factors lead to associations of coverage in the small group market with high wage industries, full-time and stable work forces, and certain industrial classifications.

A number of population-based and employer surveys confirm these associations. Analysis of the Current Population Survey confirms an association between rates of coverage and: firm size, seasonality of work and employee turnover (Long & Marquis 1 993). A sample of employed adults drawn from the 1987 National Medical Expenditure Survey showed an

increased probability of employer-sponsored coverage related to six personal characteristics (age, ethnicity, marital status, education, income, and region) and six workplace characteristics (full-time employment, union status, multi-or single-site employer, business size, wage and occupational code) (Coward, Clarke and Seccombe 1993). This analysis is particularly pertinent in that it included a variable for metropolitan or non-metropolitan location which was not significant in predicting coverage when all other factors were controlled. When the lens is focused on small businesses, national and local surveys show a significant relationship between coverage and increased firm size, age, wealth, wage rate, and a decrease in the proportion of part-time workers (HIAA 1990; McLaughlin & Zellers 1992).

The literature, thus, consistently demonstrates a larger problem with lack of employment-related coverage in rural areas, but is inconclusive in determining the extent to which this situation derives from workplace characteristics or employee characteristics. Further, although small business size has been repeatedly identified as a notable risk factor, the inter-relationship between size and rural location has not been explored.

RESEARCH QUESTIONS AND ANALYSIS STRATEGY

This study addressed four questions:

1. How important is residential location (urban or rural) in determining whether a small business will offer health insurance coverage?

2. How important are the characteristics of the business and the composition of the workforce in determining differences in insurance coverage among urban and rural small businesses?

3. How important is a worker's status as a full-time, part-time or seasonal worker, in determining the likelihood that s/he will participate in an employment-based insurance plan?

4. Do self-reported reasons for non-coverage reveal location-specific external barriers or cultural factors that can help explain lower coverage rates in rural areas?

Data Source and Variable Definition

As part of a Robert Wood Johnson Foundation-funded health insurance demonstration program, the Muskie Institute of the University of Southern Maine conducted a survey of all owners of businesses of fifteen or fewer employees within designated regions in the state of Maine, between spring, 1 989 and winter, 1 990. The areas included Somerset county (uniformly rural), part of Aroostook County (uniformly rural), and the Bangor region (the third largest city in Maine). Businesses were identified through listings obtained from the state Department of Labor.

The surveys were conducted by the Institute's Survey Research Center through telephone interviews by trained interviewers, with the business owner or person in the firm most familiar with health benefits and personnel policy. The final data base contained 1,913 completed interviews, for an overall response rate of greater than 70 percent of businesses determined to be eligible after screening questions.[2]

The interview captured information on the respondent firms' current health insurance coverage status, characteristics such as years of operation, the number and employment and demographic characteristics of the work-force (age, sex, full-time, part-time, seasonal), and work-force participation rate in the health plan, where a plan was available. A four digit standard industrial classification for each firm within the sample was obtained from the Department of Labor.[3] In addition, respondents were queried regarding basic firm characteristics such as number of years in business, and employee turnover rates.

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[2] Businesses were determined to be ineligible if they had more than fifteen workers at the time of the interview, if they were part of a larger organization with health benefit decisions made at another
location, or if they had gone out of business.

[3] The two digit classification was used for the purposes of this analysis.

Based on this survey, we constructed variables shown by prior research to contribute to the risk of uninsurance: business size, age, proportion part-time, proportion seasonal, standard industrial classification (SIC), employee turn-over rate, and the demographics of each business' work-force (average age of the full-time workers, and proportion female). Business size is measured as the number of full-time employees of the firm, inclusive of the business. owner. Age is measured as years of operation. Full-time employees are those working thirty or more hours per week. The part-time category excludes temporary or seasonal, regardless of hours worked. Employee turn-over rate is a measurement of the number of full-time employees hired in the previous year (whether replacement or additions) divided by the number of full-time employees.

Of particular interest to this analysis is the designation of the firm as urban or rural. Firms located in a Metropolitan Statistical Area[4] (MSA) were defined as urban and those not in an MSA as rural. This classification system results in a rural designation for all our survey respondents from the Somerset and Aroostook County samples, and a mixed urban and rural designation for the Bangor sample, depending on the location of the business in relation to the city. Our sample contains 1,227 rural and 681 urban respondents.

Data Limitations

Due to limitations of the data base, we were precluded from incorporating a measurement of firm wealth in our analyses. Measurements such as net revenues, gross revenues or average wage, have been shown to be important explanatory factors with regard to insurance coverage (HIAA 1 990; Mclaughlin & Zellers 1 992). While it seems likely that

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[4]   In the 6 New England states, cities and towns are used as the basis for defining MSAs. Cities and towns are grouped according to population densities and commuting patterns. Each New England MSA must have a core Urbanized Area with a population of at least 50,000 and a total MSA population of at least 75,000.

rural firms are, on average, poorer than urban firms, and, thus, wealth may play a role in the lower rates of coverage found in rural areas, it is less likely that rural firms of the same size, age and industry-type as their urban counterparts are systematically poorer.

Single state studies always raise questions regarding the generalizability of findings to other areas of the country. A comparison of our sample of businesses with a survey of businesses conducted in 1990 by the Health Insurance Association of America (1990), reveals strong similarities in the patterns of coverage among small businesses. Nevertheless, the general heterogeneity of small businesses suggests the need for caution in generalizing these findings.

Analytic Methods

Our analyses initially examine the bivariate relationships comparing insured and uninsured firms with regard to size, rural/urban location, workforce composition, and other risk factors expected to be associated with greater or lesser likelihood of offering coverage. We also compare urban and rural firms employing bivariate techniques. Based on prior research, we expect urban firms to have higher rates of insurance coverage than rural firms (HIAA 1 990). Further, we expect that higher proportions of seasonal and part-time workers will be associated with lower rates of coverage (Coward, Clarke and Seccombe 1 993).

We utilize two multivariate models to address our first three research questions. A logit model of the log likelihood of offering coverage allows us to test the effect of workplace characteristics and residential location on insurance coverage, when controlling for other business characteristics. In this model, workforce composition (percent of workforce that is full time) is a surrogate measure for the seasonality of the business. We expect that full-time workforce composition will be strongly associated with increased likelihood of offering coverage, but that urban location will not when other factors are controlled. This hypothesis

derives from the supposition that, all other factors being equal, small firms that are largely seasonal or part-time, in nature, will not be in a position to sustain health benefits for their employees. Insurers frequently require full-time work status among participants in small groups to prevent employers from adding relatives with chronic conditions to the payroll so that they can gain access to insurance benefits. Thus, while rural firms may be smaller, have more employee turnover, and may be more seasonal than urban firms, we would not expect rurality, per se, to increase barriers to coverage.

The second model is responsive to the concern that overall coverage rates are determined not just by whether an employer offers a plan, but also by the extent to which employees are enrolled in the plan. This model is limited to the insured businesses within our sample. We use a linear regression model to test the explanatory power of workforce composition and other risk factors on the proportion of the workforce participating in the company's insurance plan. Here again, we would expect increases in the proportion of full-time workers to be strongly associated with increases in employee participation, and would not expect rural or urban location to influence participation rates (Coward, Clarke and Seccombe 1993).

We explore the fourth research question, regarding perceived barriers to coverage, using bivariate analyses. The survey included a battery of questions asking the respondents to rank in order of importance, a series of factors that could contribute to a decision not to offer a health plan. Because these questions were asked only of uninsured businesses, we did not develop scores for inclusion in the logit model of the likelihood of offering coverage. However, because these self-reported rankings offer insights into employer priorities and decision-making that are not captured in the model, we employ bivariate techniques to test

for significant differences between urban and rural employers that may help explain the results of our multivariate models.

FINDINGS

Factors Associated with Coverage in Rural and Urban Small Businesses

Bivariate analyses of the survey data reveal most of the expected relationships. between insurance coverage status and the risk factors of interest (Tables 1 and 2). Insured firms are larger, older, have a higher proportion of full-time workers, a lower turnover rate, a higher proportion of female workers, and are more likely to be urban than uninsured firms. Each of these relationships is statistically significant. Age distribution of the workforce, as measured by average age, does not have a significant relationship to the firm's likelihood of offering insurance coverage in this sample.

The analysis of firms by industry classification offers both expected and unexpected findings (Table 2). Not surprisingly, wholesale firms and finance and insurance businesses are ranked highest in terms of percentage with insurance coverage and construction firms are the lowest. However, the finding that manufacturing firms are below average in rates of coverage and agriculture, forestry and fishing businesses were above average, is a departure from the pattern observed in other research (N FIB 1 990). Because this sample is limited to firms with fifteen or fewer employees, the characteristics of these businesses may be quite different from studies including larger firms. A manufacturing firm this small, for example, is unlikely to resemble a large, assembly-plant manufacturer.

Table 1
Hypothesized Risk Factors, Insured and Uninsured Firms

	INSURED (N = 822)	UNINSURED (N = 1,091)
Average Size**	4.7	2.8
Average Firm Age**	20.8	14.3
Percent Full-time**	68.6%	55.2%
Percent New Workers* *	13.3%	1 6.8%
Average Worker Age	38.8	39.1
Percent Female*	38.6%	39.1%
Percent Urban**	40.7%	31 .9%

*   p< .05
**   p< .01

TABLE 2
Industry Classifications of Firms, Urban & Rural

Industry Classification	Percent Insured (Rank Ordered)	Distribution of Urban Firms #	%	Distribution of Rural Firms #	%
Wholesale	67.1	36	5.4	43	3.6
Finance & Insurance	57.7	51	7.6	46	3.8
Agric/Forestry/Fishing	46.3	14	2.1	27	2.2
Services	45.7	257	38.0	321	26.5
Manufacturing	40.0	24	3.4	95	7.8
Transportation	37.7	16	2.4	98	8.1
Retail	37.0	173	25.4	375	30.9
Construction	31.5	107	15.8	207	17.1
Total	43.1	678	100.0	1,212	100.0

Nevertheless, industry classifications in this sample are associated with significant differences in rates of coverage and are distributed differently across urban and rural areas.[5]

These analyses show a disproportionate distribution of insured firms within urban, as opposed to rural areas. As indicated earlier, we hypothesized that the lower rates of coverage among rural firms is an artifact of the higher prevalence of risk factors known to be associated with lack of insurance. To test this hypothesis, we calculated a simple odds ratio for urban/rural coverage differences without controlling for any of the other explanatory factors (Table 3). We would expect the differential in odds between urban and rural to be substantially reduced after controlling for other independent variables. Further, if the other variables account for urban and rural differences, the coefficient for the urban/rural variable should not be significant in the full logit model. As shown in Table 3, the urban and rural firms in our study have substantially different rates of insurance coverage, with rural firms only about 68 percent as likely as urban firms to have a health benefits plan.

TABLE 3
Likelihood of Coverage Among Urban and Rural Small Firms

	URBAN		RURAL	
	#	%	#	%
Insured	334	49.0%	486	39.6%
Uninsured	347	51.0%	741	60.4%
Total	681	100.0%	1,227	100.0%

Chi-square: p< 0.000
Odds Ratio: .681

[5]   In an effort to develop more interpretable findings with regard to industry classification, we examined frequencies, bivariate analysis and some exploratory models making use of the three and four digit classification refinements. These efforts were unsuccessful in adding to our understanding of the relationships of industry to insurance coverage risk and we report only the two digit analysis. The development of a classification scheme using SIC codes which incorporates the insurance industry's risk classification system, would be a valuable tool for analysts interested in the factors driving insurance coverage

decisions among small businesses.

The results of the logistic model (Table 4) indicate that the variables associated with higher rates of coverage in the bivariate analyses also have a significant effect on the log of the odds of coverage, in the expected direction. Older businesses have a higher probability of offering coverage, when controlling for other factors, as do businesses with lower rates of employee turnover. A review of the average derivatives indicates that size of business has the strongest effect on increasing probability of coverage, from among the continuous variables. The gender composition of the workforce does not have a significant relationship to the likelihood of coverage, controlling for other factors.

TABLE 4
Logit Model for Insurance Coverage

Variable	Coefficient	Odds Ratio	95% CI
Business Age	0.0178**	1.02	1.012 - 1.024
Size	0.2553**	1.29	1.230 - 1.355
Percent Full-time	0.2422	1.27	0.861 - 1.885
Employee Turnover (Percent new workers)	-0.5770**	0.56	0.368 - 0.857
Percent Female	0.0999	1.10	0.796 - 1.534

Industry Type
  Agriculture
  Manufacturing
  Transportation
  Wholesale
  Retail
  Finance
  Service
	0.4133
	-0.1653
	0.2384
	0.9646**
	0.3315*
	0.8625**
	0.5649**
		1.512
		0.848
		1.269
		2.624
		1.421
		2.369
		1.759
			0.725 - 3.154
			0.510 - 1.409
			0.771 - 2.089
			1.455 - 4.730
			0.994 - 1.952
			1.393 - 4.028
			1.251 - 2.474

Rural Location	-0.3596**	0.698	0.562 - 0.867

* $p < .05$
** $p < .01$

Construction, which is strongly associated with lack of coverage, was taken as the reference category for industry type. This model indicates that very small businesses in agriculture, manufacturing and transportation are no more likely than construction firms to

offer insurance policies. Wholesale, retail, finance and service businesses have much higher probabilities of being insured. In fact, wholesale and finance firms in this sample are each more than twice as likely as a construction firm to offer coverage, all other factors being equal.

Contrary to our expectations, rural location continues to be a significant explanatory factor even when all other risk factors are taken into account. In fact, the odds ratio in the more fully specified model, which indicates that rural firms are only 70 percent as likely to offer coverage as urban firms, is only marginally different from the unrestricted relationship.

This analysis indicates that the model does not capture adequately the factors affecting the greater risk of uninsurance among rural small businesses. Even when other known risk factors are controlled, rurality conveys greater risk of uninsurance. We look at some possible contributory factors to this rural phenomenon in our analysis of employers' self-reported barriers to coverage, in the next section.

Another important finding from the logit model is that workforce composition (percent full-time, part-time and seasonal) does not contribute significantly to a firm's likelihood of offering coverage. Thus, despite the fact that insured firms have a higher proportion of full-time workers (see Table 1), having a high proportion of part-time and seasonal workers does not seem to influence the likelihood of the availability of a health benefits plan, when other firm characteristics are taken into account.

In the model presented, workforce composition is defined as percentage of the workforce that is full-time (with both part-time and seasonal workers included in the denominator). We also modeled workforce composition as a categorical variable, dividing firms between those that are 100 percent full-time, those that are 0 percent full-time and those with a mix of workers, hoping to use this variable as a measure of the "seasonality" of

the business, itself. This categorical variable was no more successful in explaining the likelihood of offering coverage than was the workforce composition variable in the logit model. We conclude that although workforce composition is very important to the dynamics of individual worker coverage it does not influence the likelihood that a health benefit plan is offered for firms in this size range. The importance of employment characteristics on individual worker coverage is explored later in the paper.

Self-Reported Reasons for Not Offering Health Insurance Coverage

The importance of the residential variable to the logit model suggests the need for further information on the barriers to insurance coverage experienced by small businesses in rural areas. The survey's questions of uninsured small employers regarding the factors influencing their insurance decisions, point to some directions for future research.

When asked to rank from "very important" to "not at all important", reasons for not having health benefits, rural uninsured employers responded somewhat differently than urban uninsured employers (Table 5). In general, both rural and urban firms are unanimous in ranking premiums, profitability, and alternative sources of employee coverage as the most important reasons not offering insurance. Rural firms, however, are more likely to rank as important: a lack of good information on health plans, problems administering the plan and that the company had been turned down because it was too small. Further, rural business owners are more likely to say that they are not interested in providing insurance.

These responses may indicate a history, in rural areas, of reduced access to the brokers and agents on whom small businesses rely for insurance policy information. It stands to reason that low population concentrations and substantial time investment per sale make rural areas less attractive to brokers and insurers. The fact that rural businesses rank with greater importance that they had been turned down because their business is too small may

also relate to a lack of access to alternative health insurance brokers and/or plans. Finally, the fact that rural businesses express less interest in insurance coverage may reflect less labor market competition from businesses with richer benefits, as might be found in urban labor markets. Alternatively (or in addition), this attitude could reflect a different business culture in rural areas in which employer provided health coverage is not considered the norm.

TABLE 5
Factors Contributing to Employers' Decision Not To Offer Health Insurance Benefits

	RURAL Mean	URBAN Mean	T
Premiums are too expensive	1.30	1.41	-1.83
Firm is not sufficiently profitable	2.29	2.50	-1.95
Many employees are insured elsewhere	2.64	2.62	0.15
Lack of good information*	2.86	3.14	-2.47
Employees can be recruited without offering	2.89	2.91	-0.25
Cannot find an acceptable plan	2.99	2.97	0.19
High employee turnover	3.15	3.26	-0.96
Employees don't want insurance	3.23	3.42	-1.85
Problems administering plan**	3.31	3.69	-3.64
Not interested in providing health insurance*	3.42	3.63	-2.02
Company turned down because it was too small*	3.67	3.92	-2.39

1 = Very important
5 = Not at all important
* = p<.05
** = p<.O1

Factors Associated With Worker Participation In Their Employers' Health Plans

The dynamics of individual employee coverage within the small business workforce can be quite different from those that govern an employer's decision to offer coverage. A part-time or seasonal worker, for example, may work in a firm that offers a health benefits plan

but be ineligible for that plan. A worker may have coverage through a spouse's plan and be disinterested in his/her employer's offering. In some firms, where coverage is available but the employer's contribution is minimal, some workers may elect not to enroll in the plan.

Table 6 shows the workforce composition of the urban and rural firms in the sample. Urban firms have a larger proportion of full-time workers; interestingly, though, this higher. full-time rate derives entirely from differences among seasonal workers. Urban firms have a higher proportion of part-time workers than rural firms; the proportion of seasonal workers in rural firms is, however, almost double that of urban firms.

TABLE 6
Workforce Composition of Urban and Rural Small Businesses

	Urban		Rural	
	#	%	#	%
Full-time	2,447	57.1	4,414	50.6
Part-time	1,097	25.6	1,663	19.1
Seasonal	742	17.3	2,644	30.3
TOTAL	4,286	100.0	8,721	100.0

Chi-Square = 267, p<.0001

Table 7 shows the rates of participation in employer plans by full-time, part-time and seasonal workers. These results are shown first for the subset of workers in firms which offer coverage, since those in uninsured firms have no opportunity for participation in a workplace plan. As expected, participation rates drop precipitously for part-time and seasonal workers. Overall, nearly 73 percent of full-time workers are covered, compared to less than 6 percent of seasonal workers. Urban full-time workers have a slightly higher rate of participation than rural full-time workers; a slightly higher proportion of part-time and seasonal workers in rural areas are covered.

	URBAN % Covered	**RURAL** % Covered	**TOTAL** % Covered
Within Insured Businesses			
Full-time**	75.61	71.02	72.87
Part-time*	11.45	15.90	13.99
Seasonal	4.28	6.31	5.84
Sub-Total *** (Among insured firms)	51.59	44.30	47.14
Total *** (Within Insured and Uninsured Firms Combined)	29.21	20.78	23.56

*   p<.05
**   p<.01
***   p<.001

The sub-total row of Table 7 shows, within insured firms, the combined effect of workforce distribution among full-time and non-full-time workers, and these groups' participation rates. The overall low rates of employer benefit coverage are striking. Across the entire workforce of these small businesses, *among firms with health insurance plans in place,* fewer than half the employees obtain health benefits coverage through their employer. The proportions of employees covered in small businesses is significantly lower in rural (44.3 percent) than urban (52.0 percent) businesses. The bottom row of Table 7 shows the combined effect of employer sponsorship rates and employee participation rates. Within the entire labor force employed by these small businesses, less than one quarter obtain health coverage through their employer. The rural population is particularly disadvantaged both with regard to plan availability and ability to participate when a plan is in place.

As indicated in Table 8, increases in insurance plan participation are significantly associated with higher proportions of full-time workers, controlling for other factors. Location in an urban or rural area does not contribute significantly to the model. An increase in the proportion of women in the workforce is negatively associated with plan participation rates, perhaps indicating a spousal coverage effect. The fact that business size is negatively associated with participation rates is most likely a result of the fact that as business size decreases, insurers are more likely to require 100 percent participation as a condition for offering a policy.[6] Even though only one other variable, wholesale industry type, is statistically significant, the overall model has a relatively high adjusted R^2 of .408. This reinforces the interpretation that workforce composition is a very important predictor of worker participation in employer health coverage plans.

DISCUSSION

This analysis of small businesses shows that small rural firms are only about 68 percent as likely as their urban counterparts to offer a health benefit plan to their employees. When differences in size, age, employee turnover, industrial type and workforce composition are taken into account, the odds ratio for rural firm coverage rises only to 0.70. Clearly, small rural firms face significant barriers to coverage unaccounted for by commonly understood risk factors. The uninsured employers who responded to our survey pointed to some of the factors that may be contributing to the problem: marketing and informational barriers in the health insurance market, cultural barriers, and the impact of distance, low population density, and isolation.

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[8]   Business size is calculated as a count of full-time workers thus eliminating a counter-acting effect of insurer reluctance to cover part-time and seasonal workers.

TABLE 8
Percent of Workforce With Health Insurance:
Linear Regression Model

Variable	Parameter Estimate	T Score	P
Intercept	12.91	2.32	0.020
Business Age	0.03	0.88	0.378
No. Full-Time Employees	-1.79	-6.31	0.000
Percent Full-Time	70.13	21.80	0.000
Percent New Full-Time	-1.76	-0.49	0.624
Average Age of Full-Time Workers	0.13	1.22	0.223
Women as Percent of Full-Time Workers	-5.60	-2.00	0.046
Agriculture/Forestry/Fishing	3.28	0.57	0.569
Manufacturing	5.02	1.24	0.217
Transportation	4.07	0.99	0.320
Wholesale	7.95	2.06	0.040
Retail	-1.55	-0.56	0.578
Finance	3.96	1.01	0.313
Services	*0.35*	0.13	0.900
Rural/Urban	-1.53	-0.93	*0.355*

$R^2 = 0.408$
F stat. = 39.91
p < .000 1

The results of this study suggest that even if the percentage of firms offering coverage were leveled between urban and rural small business communities, coverage rates in rural communities would remain lower due to the lower participation rates in rural firms. The higher proportion of seasonal workers is responsible for a substantial portion of the difference.

Both of these factors -- plan availability and employee participation -- contribute importantly to the problem of lack of health insurance in rural areas, and, as indicated in Table 7, compound the disadvantage experienced by rural small business employees.

Barriers such as these are not easily remedied. Geographic isolation is a fact of life for many rural areas and labor market characteristics are not easily ameliorated. If, as suggested by this research, such inherent characteristics of rural areas are responsible for the differential in employer sponsorship of health benefits plans, policymakers will need to consider the additional technical assistance, marketing and other manpower needs of rural areas, to bring them into a universal, employer-based system. Of immediate concern are the implications of these findings for the debate between employer mandates and incentive-based reforms. This research suggests, for example, that unless incentives include support for intensified marketing and insurance brokering in rural areas, rural employers will remain at a disadvantage in relation to their urban counterparts, with regard to their ability to make informed choices among plans (or between the advantages of offering health benefits versus no coverage). More importantly, the highly variable, checkerboard pattern of health coverage discernable in many small rural businesses is likely to diminish the effect of incentives targeted to uninsured firms. An employer of six individuals, three of whom have coverage through a spouse employed elsewhere, may have little motivation to purchase more than an individual policy to cover him or herself. The high proportion of seasonal work and seasonal workers in rural areas compounds this difficulty.

On the other hand, this research points to the difficulty of imposing employer mandates on small rural businesses. The intractability of the labor market characteristics that contribute to the low rates of rural coverage point to a potential for high non-compliance and/or high administrative cost. Policies will be required that apportion employer responsibility for

seasonal and part-time workers, based on length of employment or other factors. Further complications are introduced by the fact that some seasonal workers, in particular, farm workers, migrate from state to state on a seasonal basis. Others, especially in states like Maine which rely heavily on seasonal tourist trade and natural resource industries, are year-round residents who shift jobs on a seasonal basis. Subsidy mechanisms that are sensitive~ to seasonal variations in income will also be necessary.

The analysis presented here points to gaps in our understanding of the dynamics of insurance coverage in the small group market, especially in rural areas. It confirms, however, the findings of prior research that rural areas face heightened barriers to full, employment-based coverage, and suggests that the factors contributing to this rural phenomenon are multifaceted and complex and may not yield easily to broad, policy-driven solutions.

The principal strategies currently under consideration for achieving universal coverage - employer and individual mandates, tax-based subsidies for individuals and/or employers, insurance market reforms and tax incentives - are relatively blunt policy instruments which will have to encompass a wide variety of circumstances, from urban inner-city to rural frontier communities. The "fit" between these policy strategies and the specific circumstances of communities, businesses and employees will be imperfect at best. A better understanding of local and regional characteristics is necessary if generic reforms are to be tailored to the needs and problems of different localities. The findings of this study suggest need for additional research to understand more fully the reasons for differences in health plan coverage between urban and rural small business.

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