



“Summary of article by William T. Dickens and Kevin Lang: Labor Market Segmentation Theory: Reconsidering the Evidence” in Frontier Issues in Economic Thought, Volume 4: The Changing Nature of Work. Island Press: Washington DC, 1998. pp.40-43

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## **“Summary of article by William T. Dickens and Kevin Lang: Labor Market Segmentation Theory: Reconsidering the Evidence”**

The theory of labor market segmentation was widely discussed in labor economics in the early 1970s, as an explanation of inequality in job opportunities and earnings. Since then, the theory has faded in popularity; most economists prefer human capital theory as an explanation of labor market inequalities. This essay examines the theoretical basis for segmentation, offers an improved specification and empirical test of the theory, and concludes that it provides both a good fit to the data, and a more promising research agenda than human capital theory.

### **WHAT IS LABOR MARKET SEGMENTATION?**

There are two crucial assumptions in a theory of labor market segmentation. First, the labor market is made up of distinct segments with different rules for determining wages and employment. Second, access to jobs in some segments is limited by nonmarket mechanisms (i.e., at the prevailing wage, the supply of qualified applicants for primary sector, "good jobs" exceeds the demand). Segmentation alone, without the second assumption, would not imply market failure, or require a new theory; it might simply reflect a bimodal distribution of skills.

Early writing on labor market segmentation emphasized lack of mobility between sectors; however, this is not essential to the theory. Empirical evidence shows that in an economic expansion, black workers are more likely than whites to move into better jobs; in general, wages rise more rapidly with age and experience for blacks, but more slowly within any single job. "This is precisely what would be expected if blacks were more likely to be employed in low-wage jobs with little return to seniority while queuing for good jobs." [145] The existence of excess labor supply and queuing for high-wage jobs, and wage differences unrelated to ability or job quality, provide evidence of labor market segmentation, regardless of mobility.

The most common form of segmentation theory distinguishes between primary and secondary segments, sometimes with further subdivisions within these categories. The primary sector has good wages and working conditions, opportunity for advancement, returns to education and training, and formalized labor relations which circumscribe supervisors' authority; as a result, employees tend to stay on the job for a long time. The secondary sector of the labor market offers the opposite in most or all of these respects.

Several economic theories can explain why high wages persist for primary sector workers, even in the face of excess labor supply. Efficiency wage theories suggest that labor productivity

depends in part on the wage level. Employers may pay more than the market-clearing wage in order to increase the cost of job loss, or to meet workers' expectations about what constitutes a fair wage. Employers may also want to reduce turnover and protect their investment in training of skilled workers, or to ensure that they attract high-quality workers, in the presence of adverse selection problems (i.e., employers may not be able to fully observe worker quality either before or after hiring). Unions can raise wages; so, too, can management efforts to forestall unionization. In a firm that is earning monopoly profits, rent-sharing -- giving workers part of the excess profits -- becomes possible. Thus there is no logical inconsistency in the hypothesis that primary sector workers routinely earn more than the market-clearing wage for their labor.

## **EMPIRICAL EVIDENCE OF SEGMENTATION**

Numerous studies have found large and persistent interindustry differences in wages; these remain significant even when controlling for location and for a wide range of worker characteristics. There is a high degree of collinearity among worker and industry characteristics that might affect wages, including capital/labor ratio, labor productivity, average education, average job tenure, unionization, firm size, profit rates, and many others; as a result, the attempt to establish which of these factors are most important has been largely fruitless. This is, however, exactly the pattern one would expect if there is an underlying segmentation of the labor market, with industries differing sharply in the proportion of primary sector workers. Similar patterns have been found for differences among specific employers within an industry.

Human capital theory explains such interindustry and inter-employer differences by assuming the existence of unobserved or unobservable skill differences. This assumption is hard to maintain in the face of the evidence. Some industries and firms pay higher than average wages across the board; why would the same pattern of unobserved industry or employer-specific characteristics be shared by secretaries and truck drivers? Most studies find that when workers change industries, their wages change by nearly the full difference between the old and new industry averages; thus the unobserved skills do not appear to be transferable from one industry to another. Increasingly difficult and contorted versions of human capital theory are required to explain such findings, while market segmentation theory provides a natural explanation.

## **TESTING THE THEORY**

Early empirical tests of segmentation theory provided useful information, but were criticized for failing to provide an endogenous explanation of which segment a worker ends up in. A new approach, developed by the authors, addresses this problem directly.

The authors' model makes no a priori assumptions about which individuals, occupations, or industries are associated with the primary or secondary sectors. Using data on individual workers, it estimates three equations simultaneously. Two are wage determination equations, specifying primary and secondary sector wage-setting mechanisms; the model assigns individuals to sectors so as to produce the best possible fit with these two equations. The third equation is the "switching" equation, describing the probability that an individual with given characteristics will be found in the primary or secondary sector.

Hypotheses about the model include: the two wage determination equations will fit the data much better than any single equation; the higher-wage market segment will have substantial returns to education and work experience, while the lower-wage segment will have almost none; and a majority of adult male workers are in the higher-wage segment. A test of the model using 1983 data on some 48,000 employed male heads of household, ages 20-65, strongly confirms these hypotheses. A man is more likely to be in the primary sector if he has ever been married, is white, lives in a metropolitan area, and has more years of work experience and education.

An interesting anomaly, which requires further study, appears in the results for race: while being white has a large, expected effect on primary/secondary status, and a significant positive effect on primary sector wages, it has a negative effect on secondary sector wages.

The distribution of primary and secondary sector workers in specific industries and occupations follows the expected pattern. Industries with virtually all workers in the primary sector include paper, primary metals, and advertising, research, and computers, while eating and drinking places and liquor stores have only about half their (adult male) workers in the primary sector. Managers and supervisors are almost always in the primary sector, while retail clerks and unskilled labor have a smaller proportion of primary sector workers. However, no major industries or occupations have a clear majority of their adult male workers in the secondary sector. The classification schemes used in previous studies, typically identifying whole occupations or industries as secondary, have only a modest level of agreement with this scheme.

Can the findings described here be made consistent with standard theories? If technologies were sharply discontinuous, there could be two distinct market segments with no market failure. It is harder to explain the observed income differences: it is implausible, and inconsistent with other evidence, to suggest that low-income workers prefer the conditions of employment in the secondary sector, and are willing to give up substantial income to obtain those conditions. It is also hard to explain why blacks and more educated workers are as likely to be found in the secondary sector as they are given the advantages to them of primary sector employment. Other objections have been dealt with by the authors in earlier publications; for instance, the model does not prove that there are two, rather than more, labor market segments. It does, however, demonstrate that the hypothesis of two segments fits the data much better than the hypothesis of an unsegmented market.